

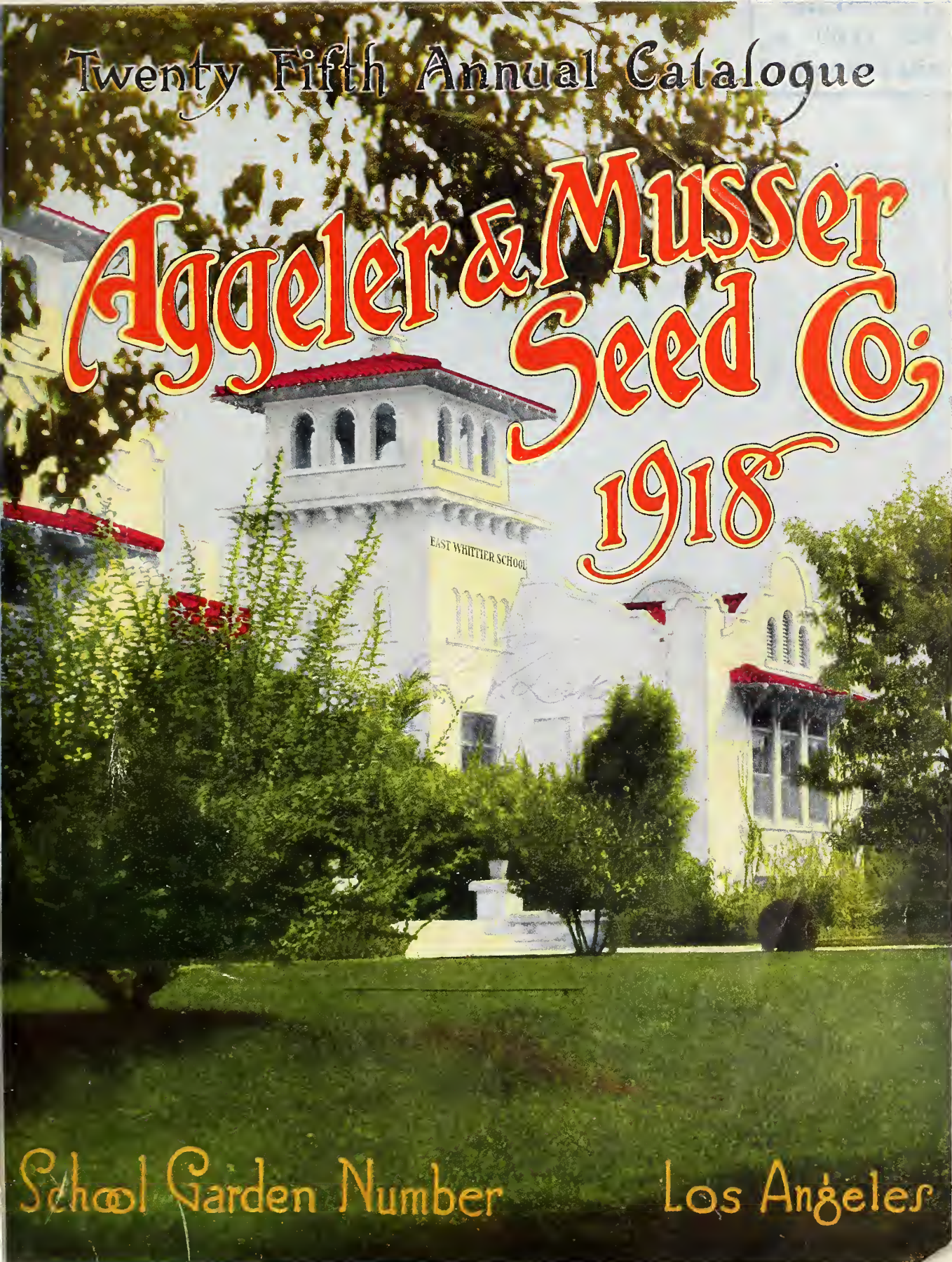
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62,005  
Twenty Fifth Annual Catalogue

# Aggeler & Musser Seed Co. 1918



School Garden Number

Los Angeles

THIS SCHOOL WAS AWARDED A \$600.00 PRIZE FOR IT'S ATTRACTIVE GROUNDS



# HOW TO ORDER BY MAIL

**YOUR NAME AND ADDRESS.**—Be very sure that your name and address are written very plainly on each order. We frequently have orders where either name is not given or address omitted. Also give plainly the R. F. D. number and box, or the street address. We acknowledge all orders by a post-card if not filled immediately. If such acknowledgment is not received, or if the order does not follow at once, write us about it.

**CASH WITH ORDER.**—The proper way is to send remittance in full to cover order and postage. We send orders C. O. D. only if 25% of the amount of order is enclosed. Plants we never send out C. O. D.

**REMITTANCES** should be made by Post-Office Money Order, Express Money Order, or by Check. For amounts up to one dollar, clean, unused postage stamps will be accepted. Coin should not be sent by mail. Checks on local banks may be sent, which will be a great convenience to many customers. We do not accept responsibility for orders which never reach us. We will be responsible for the safe arrival of the merchandise.

**SHIPPING.**—We will use our best judgment as to the best way of sending orders when specific directions are not given. On large "postpaid" orders it is better to have them go by express, if your town is on a railroad—it is safer. We prepay express charges on merchandise quoted "postpaid." If special directions in shipping are needed, send them explicitly, and where express or freight office is different from post-office, so state in space on our order sheet.

**SEEDS BY MAIL.**—We send by mail or by express prepaid, all orders for flower seeds, and for vegetable seeds (except beans, corn and peas). We do not pay postage or express charges on onion sets, field seeds, clovers, grasses, bird seeds, beans, corn, peas, tools or plants in large quantities; but we do pay them on other vegetable and flower seeds. Correspondents in foreign countries should add a sufficient amount for postage at the rate of 12 cents per pound.

**THE PARCEL POST APPLIES TO SEED.** Postal rates are as follows. Owing to the convenience of having mail brought to your door by the rural delivery system, it is well to take advantage of the low rates.

20 pounds anywhere within the city limits of Los Angeles for 15c.

20 pounds one hundred and fifty miles 24c, and 1c for each additional pound up to 50 pounds.

Nothing heavier than 20 pounds may be mailed farther than 150 miles in one package.

The Eighth Zone includes Mexico and Canada.

**ZONE RATES.**—When it is required that postage be added to the purchase price of any commodity, note the distance you are from Los Angeles, see in which Zone you live. It is then easy to estimate the exact amount of postage required, or ask your postmaster.

DOMESTIC PARCEL POST RATES						Each additional	
On Seeds, Plants, Bulbs, Roots, Books, Tools, etc.,						First pound	pound or
within the U. S. and Possessions						or fraction	fraction
First Zone, Los Angeles	and within 50 miles of	Los Angeles	.....			5c	1c
Second Zone	within	50 to 150	" "	"	.....	5c	1c
Third Zone	"	150 to 300	" "	"	.....	6c	2c
Fourth Zone	"	300 to 600	" "	"	.....	7c	4c
Fifth Zone	"	600 to 1000	" "	"	.....	8c	6c
Sixth Zone	"	1000 to 1400	" "	"	.....	9c	8c
Seventh Zone	"	1400 to 1800	" "	"	.....	11c	10c
Eighth Zone	"	all over 1800	" "	"	.....	12c	12c

**FOR PARCELS WEIGHING 8 OUNCES OR LESS**, containing seeds, bulbs or books only, the rate of postage to all zones is 1 cent for two ounces or fraction. (Over 8 ounces the parcel post rates apply.)

**FOR PARCELS CONTAINING FOURTH CLASS MATTER**—other than the above—up to four ounces is permitted to all zones at 1 cent per ounce. (Over 4 ounces the above zone rates apply.)

**NON-WARRANTY: Note.**—There are so many contingencies to be encountered in growing plants from seed and in setting out plants that are dependent on the weather and other conditions over which we have no control, that success in planting is not altogether dependent on the seed or plant. We will send out only seed which we believe will grow and produce the kind of plant and variety represented, but:

Aggeler & Musser Seed Co. give no warranty, expressed or implied, as to description, quality, productivity, or any other matter of any seeds, bulbs, plants or trees they send out, and they will not be responsible in any way for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned.

## AGGELER & MUSSER SEED CO., Inc.



OUR SCHOOL GARDEN NUMBER

# The Twenty-Fifth Annual Catalog of the AGGELER & MUSSER SEED COMPANY

ESTABLISHED 1893—INCORPORATED 1896



WE HAVE made Los Angeles and Southern California famous for the excellence of their vegetables.

WE HAVE by our creations and introductions, added millions of dollars to the revenue of the growers and shippers of the entire Southwest.

WE HAVE, through our medium of education, contributed more to the success of the homesteader and newcomer than any other agency. We have distributed without charge more than 100,000 Garden Manuals, besides as many catalogues each year.

WE HAVE, through our efforts, made Los Angeles the best fed community in America. Her vegetables and fruits are standard the world over.

WE HAVE, by the excellent merit of our introductions, been instrumental in building up great industries in canning and shipping.

WE HAVE added much to the wealth of California ranchers, by growing at home many thousands of dollars worth of seeds that hitherto were imported.

WE HAVE made friends; and through our friends we have built up a business that gives steady employment to a hundred people, and distributes more than half a million dollars every year to growers throughout the Southwest, and Southern California in particular,—a business that requires 50,000 feet of floor space, and last year paid for postage alone \$9,263.40.

WE HAVE always been leaders in our line of business as indicated by the many BIG MONEY MAKERS listed in this book.

This Seed Catalog commemorates our Twenty-fifth Anniversary; therefore, we have made of it an encyclopedia of the ranch and garden which at this time is of great importance. This catalog is so explicit and complete in its instructions that the amateur can make no mistake.

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**AGGELER & MUSSER SEED CO., Inc., Sixth and Alameda Streets**  
**Branch Store: 115 North Main Street :: Los Angeles, California**

Phones: Sunset, Main 4545: Home 60875





## OUR OFFICE

The personnel of our office force directing the management and detail work of our seed business which has in twenty-five years grown to rank with the leading seed houses of the world:

H. L. Musser, President, since its incorporation in 1896.  
E. A. Aggeler, Vice-President and Manager since 1905.  
W. B. Early, Secretary and Treasurer since 1905.  
B. T. Sawdey, Sales Manager, directing a score of outside salesmen.

C. W. Hastings, Office-Manager and Credit-Man.  
G. C. Davis, Traffic Manager.  
L. W. Hartzell, Bookkeeper.  
B. F. Sener, Cashier and Banker.  
W. D. Fraser, in charge of the Mail-Order Department.  
F. MacDonald, Assistant to Mr. Sawdey.  
Paul Kemp, who records all orders and o.k.'s prices.  
A. Isleib  
C. M. Gale  
W. R. Worthington } Chief of the outside salesmen.

Mrs. B. S. Prouty, Secretary to the President, and Vice-President, and also in charge of the mailing-list.

Miss Calla Petterson, who opens and classifies thousands of letters daily.

Miss Lillian Warden, Stenographer to Mr. Sawdey; also Stenographer to Mr. Early.

Mrs. Amy Walker, Stenographer in the Accounting Department.

Miss Eleanor Dick, in charge of the Filing Department.

Miss Blanche Bowles, Billing-clerk.

Miss Mildred Fuller, in charge of the telephone exchange connecting all departments.

To further expedite work, we are using a Burroughs Electric book-keeping machine, adding-machine, comptometer, several Dictaphones, a \$900.00 multigrapher and up-to-date filing cabinets.

Ray Bogart, with a score of assistants, manages the Shipping Department, which includes three auto trucks for local delivery.

S. H. Church, with several assistants, manages the Retail Department in connection with the main store.

Mr. J. H. Harts, with many assistants, manages the branch store at 115 North Main Street.

L. Worthington, with several assistants, cater to the wants of the market gardeners, both at the market and at the ranch.

## Information Department

The catalog contains all necessary information so that the amateur who reads cannot but succeed, but many inquiries come to us which indicate the writer has not read, or, having read, prefers to have pointed information direct from us, or further information on certain subjects. Therefore, the establishment of our Information Department where the entire time of a competent person and stenographer are devoted exclusively to the answering of letters of inquiry.

## Accommodation Department Real Estate

Last year we inserted in our catalog an invitation to those with us any parcel of real estate you may have for rent. As a result we have, without cost to either owner or renter, placed more than two thousand acres.

In this work we merely acquaint the would-be renter with the owner but we do not pretend to make any recommendations unless from actual knowledge.

## Marketing Bureau

We are so well acquainted with our customers that when shippers want certain produce, we can usually put them in touch with the grower. On the other hand we have found buyers for many growers (particularly newcomers) who were not familiar with the marketing end of their business. It is our pleasure to be of as much service to our customers as possible. The service of our Information Department is voluntary and without charge.

The new and novel feature of our 1918 catalog is the marketing hints given with each subject; you will find them of much value.

## Prophecy Fulfilled

In last year's catalog we inserted the following prophecy

The value of the vegetable crops of Southern California for the year 1915 are estimated at \$25,000,000; fruits, both citrus and deciduous at \$40,000,000. We consider that the shipping of vegetables has not yet assumed the proportions of an organized systematic business in the sense that the citrus industry has attained. We must confess that \$25,000,000 looks like a good start. 'Tis true, it is a good start, but we repeat, it is only starting, and the shipment of vegetables to the far East the spring and fall of 1917 will so far exceed all previous years that the records will be astonishing.

Why this extraordinary increase?

Because the phenomenal prosperity in the East will create a market for winter vegetables as never before.

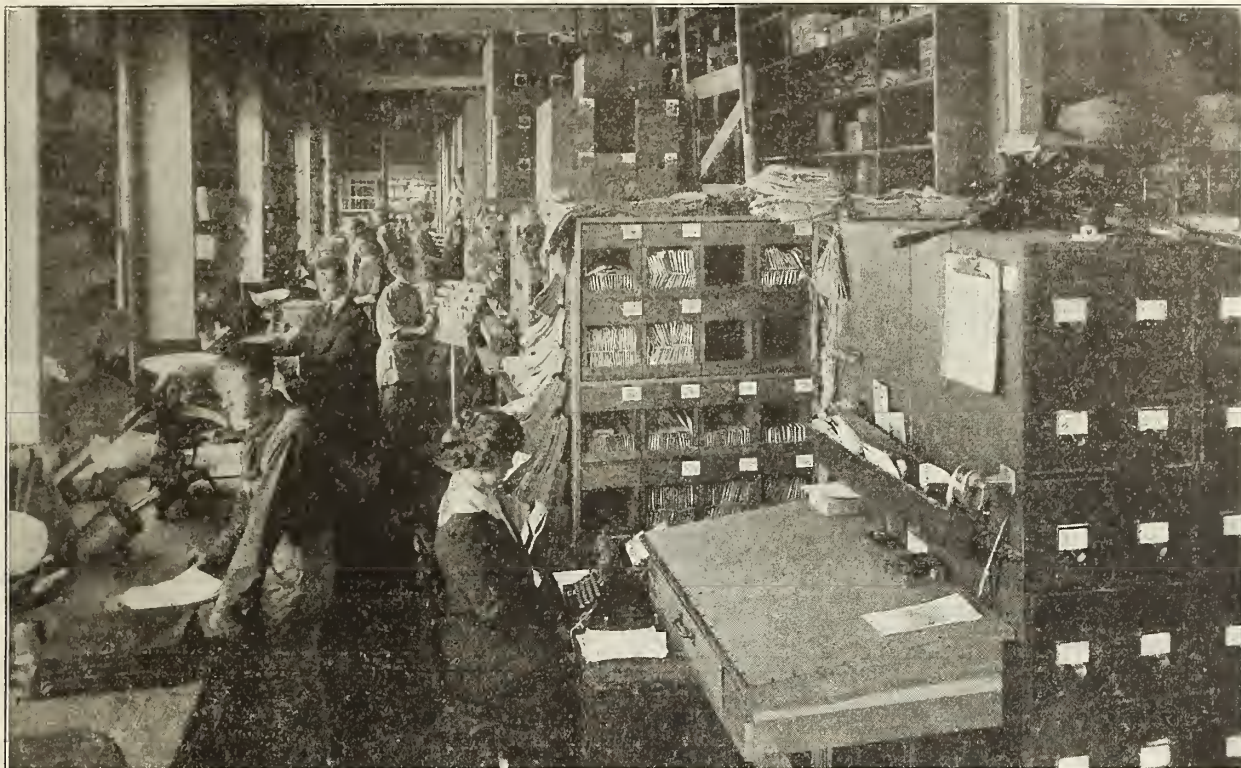
Because shippers are now so organized that they can reach the remotest markets in the briefest time, and can deliver the goods in the best of condition.

Because we are now furnishing our customers with the right seeds that will grow the best vegetables that will carry to distant markets in perfect condition.

Because our growers are working more intelligently to produce vegetables of a better quality.

Because California vegetables are standard wherever they are offered. They are standard because they are grown from A. & M. seeds.





Mail Order Department

## Our Mail Order Department

Managed by W. D. Fraser and Mrs. M. Gaylord, with ample corps of assistants, whose duty it is to serve promptly and accurately, very often as many as a thousand customers a day.

With a packet-filling machine having a capacity of 30,000 packets per day, they put up more than a million packets each year. To do this without error requires extreme system and efficiency.

A. I. Tunnison, who with a score of assistants, has charge of the distribution and testing of all seeds. His records are up-to-date so that at a moment's notice he can give the germination of any seeds that we have.

Wm. Turner, with his assistants, attends to the cleaning and milling of all field seeds as they come into the house before they are placed in stock.

Should you at any time receive seeds which have not been recleaned, advise us at once, as there is no excuse for sending out un-clean seeds with our up-to-date machinery for cleaning all kinds of seeds.

## What This Seed Catalog Contains

This seed catalog contains cultural instructions which, if studied carefully, would guide almost any amateur to success. The information tabulated in this catalog, answers more than 1000 questions, if the reader will but study it carefully.

With each variety of seed listed, there is sufficient instruction for the best culture of that variety.

Read this catalog and learn what varieties are best suited to your individual conditions,—your soil, climate, irrigation, purpose, and market.

### MORE THAN ONE THOUSAND QUESTIONS ANSWERED

This catalog contains full instructions necessary to make a home or a market garden if you will read it carefully and refer to the several tables for the information you wish.

The amateur market gardener will find with each subject the information needed to help select the proper variety to suit the season, and a reference to the tables will give him further information concerning the planting and value of various crops.

The rancher, by reading any subject which interests him will receive much help in the selection of varieties and many hints on the care of his crop.

But, if, after reading the catalog, there is further information, or more specific information wanted, do not hesitate to write our information department.

This Department, together with our catalog is intended to save the amateur, the home-steader and the new-comer much of that preliminary experimental work which often means failure and bankruptcy.

The information that has come to us during our twenty-five years of active work among the growers throughout the southwest has been chronicled each year in our annual catalog, so that he who will read carefully cannot fail because the information is complete from the preparation of the soil to the marketing of the crop.

## Why These Testimonials

**J. B. WATSON, Alameda County, Cal.**

Yours is the most interesting catalog I have ever read

**N. J. GREEN, Texas.**

Your catalog is the finest ever.

**ELIZABETH QUICK, Monterey, Calif.**

It was a wise move to put all your information into one book. If the seeds I get of you this year prove as good as those I got last year, I shall forever sing your praises.

**SCIANNI & ROTICCI, Stanislaus Co., Cal.**

We consider your catalog has the best assortment of wants and is one of the finest illustrated and printed books on the market.

**L. E. TOWER, Orange Co., Cal.**

Your catalog is one of the best I have ever seen; being so full of reliable information for the gardener.

**MRS. ALDEN P. BARKER, Newport, Rhode Island.**

I find your catalog the most complete and instructive that I have ever received.

**L. F. CULVER, San Fernando Valley.**

Your catalog is the best and most comprehensive we have ever received.

**R. E. HOWLETT, San Diego County, Cal.**

I have found your catalog to contain much useful information; it is the best catalog I have ever seen.

**MRS. L. F. BUELL, Texas.**

We bought seeds and berry bushes from you two years ago and were better satisfied than with those bought elsewhere. Large planters here also recommend you.

**MRS. S. E. CATLETT, Mist, Cal.**

When you do issue another catalog I will thank you very much if you send me a copy as I never yet found one to equal yours—it's a pleasure every time I pick it up—"a book of knowledge!"

**M. HARDING, Oklahoma.**

I have a copy of your 1917 Catalog and must say that it contains more real worth-while information than any I have ever seen.

**FROM HAWAII.**

I am glad to report that last summer my school at Paaupau won the first School Garden Prize offered by the Honolulu Star-Bulletin, and we did it with your seeds.

### BECAUSE

Because this catalog is intended to be of the greatest benefit to the grower.

Because our seeds are selected to give the best results when grown according to instructions in the catalog.

THE SPACE in this catalog is devoted to hints and information useful to the grower; not "Literary rainbows" about seeds of doubtful merit intended for the "Rainbow Chaser." Our seeds are just what is claimed for them.

If this catalog pleases you, tell your neighbor to send for one.



## The Moral and Philanthropic Obligation of the Seedsman

It is the moral obligation of every man selling seeds to be so well informed concerning his business that he can advise his customers what varieties of seeds are best suited to the particular requirements of each customer; in short,—“What to Plant, and when to plant it”; also, “regarding soil, climate and market.

**Every Seedsman, or Clerk,** selling seeds, should be educated to know, as far as it is possible, each variety by appearance. Such knowledge would tend to avoid errors and would prevent many costly mistakes.

**Every customer** intending to plant one-fourth acre, or more, should obtain this seed catalog and study it carefully before purchasing his seed. The knowledge gained thereby will be of great value in the selection of seed.

## The Burden of the Seedsman

Unlike other lines of business where merchandise is bought at a certain price and sold at a profit to any buyer regardless of any consideration except price and quality, the seedsman must familiarize himself with every agricultural center of the world and must draw upon them for their particular product, if it cannot be produced nearer home.

They must create and fashion their commodities to suit the purpose.

To illustrate this: We have created and improved in Southern California many new things of great value, as follows:

### Big Money Makers

The **Chilian Watermelon**, created in Orange County and introduced by us twenty years ago, has since that time been bringing to the growers of the southwest annually, more than \$100,000 dollars.

The **Anaheim Chili Pepper**, created also in Orange County, improved and introduced by us eighteen years ago, has gradually grown into a national commodity. More than 2000 acres are grown annually, bringing half a million dollars to growers in Southern California, and as much more to canners and their employees. The same is true of the **Pimiento** we introduced from Spain only seven years ago.

The **White Rose Potato** came from nowhere, discovered and introduced by us nineteen years ago, has defied all competition since that time and stands out today in prominent contrast against all other varieties grown here, and is worth to growers several million dollars annually.

The **California Pearl Cauliflower**, discovered in Los Angeles County and introduced by us in 1898, is the best variety in all the world so that it takes precedence on any market where it is sold. Its value to the grower of Southern California is above the million mark.

The same is true of the **Winningstadt Cabbage**, the seed of which was introduced by us from France, but now largely produced in several parts of the United States.

Probably the proudest achievement, and perhaps the most valuable, was the introduction by us in 1905 of the **Los Angeles Market Lettuce**, now worth well above a million dollars annually, to the growers of the southwest.

Other of our creations and introduction, ranging in annual value from \$100,000 to half a million dollars, are the **Golden Beauty** and the **Hybrid Casaba**, **Oregon Evergreen Sweet Corn**, **Angeleno** and **Klondike Watermelon**, **Monstrous Lima**, **Tepary**, and **Kentucky Wonder Wax Beans**, **A. & M. First Early Tomato**, and **Orange County Prolific Corn**.

We have created and introduced many things of less aggregate value, but of equal importance in their class, such as: The **Lemon Cucumber**, **Triumph Muskmelon**, **Chinese Cabbage**, **Chayote**, **Armenian Melon**, and the **Giant Spinach**.

We have tried and condemned many things which have proven ill adapted to our conditions and thereby saved much time and expense to individuals who would have experimented and lost. Among these are The **Arabian** and **Turkestan Alfalfa**, and countless numbers of vegetables which we are continually trying out.

The seedsman's burden does not end with the testing and introduction of new things, but they must educate the amateur, teaching them “What to plant and when and how to plant it”; consideration of soil, climate, cultivation and irrigation.

### GET READY NOW FOR BIG BUSINESS

In last year's catalog, we made the following statement: “As the appreciation of California vegetables grows in various parts of the country, so will the demand. There have already been years when our products would not begin to fill the call.”

That time is right now—get busy and plant big crops for the shipper, but plant according to your soil and to the climate of your locality. Consult us about that. But the things to consider as soon as you read this page is: Set out cabbage plants until February 15th. Plant at once turnips, beets, carrots and onions. As soon as your location will allow, plant potatoes. Make hot-beds at once and plant peppers, egg plant and tomatoes.

If you would be ready at the right time, heed the advice at once. Don't delay.

## How We Have Met This Burden

First—we published and distributed freely 100,000 Garden Manuals, and we now include in this catalog the entire contents of this manual. The general information will be found in the first part of the book and in the several tables. Particular information is included with each subject.

This catalog is intended to help the amateur and newcomer.

Every clerk in our store is educated to assist the customer in his selection, and should a customer ask for seeds not seasonable, the clerk is instructed to call attention to it and suggest some variety better suited to the time.

The seedmen's burdens are not to be lightly considered. They must pioneer, pave the way, and often at great expense, guide the grower into the right channels for profit, because one dollar invested in the wrong variety may cause a loss of a thousand dollars to a grower who can ill afford it.

An unskilled gardener will lose, no matter what seeds he plants. With this catalog there is no excuse for ignorance.

Seedsman have little trouble with professional gardeners, it is the amateur gardener who makes the trouble. It matters not to him if 99 professional gardeners succeed with the same seed, his failure is attributed to the seed regardless of cultural conditions.

This catalog insures success if one will but study it and follow instructions.

## The Whole Southwest Benefits by Aggeler & Musser's Big Money-Makers

### CLASS ABOVE \$1,000,000 ANNUALLY

#### THE BIG FOUR

**White Rose Potato**  
**Los Angeles Market Lettuce**  
**California Pearl Cauliflower**  
**Winningstadt Cabbage**

### CLASS ABOVE \$500,000 ANNUALLY

**Golden Beauty Casaba**  
**Pimiento Pepper**  
**Anaheim Chili**  
**Tepary Bean**

### CLASS ABOVE \$100,000 ANNUALLY

**Hybrid Casaba**  
**Oregon Evergreen Sweet Corn**  
**A. & M. First Early Tomato**  
**Chilian, Angeleno and Klondike Melons**  
**Triumph and Armenian Muskmelons**  
**Monstrous Lima Beans**  
**Kentucky Wonder White Seeded Beans**  
**Orange County Prolific**

### THE POPULAR CLASS

**Lemon Cucumber**  
**Chinese Cabbage**  
**Kentucky Wonder Wax Beans**  
**A. & M. Giant Spinach**  
**A. & M. Early Gem Carrot**  
**Chayote**  
**A. & M. Chinese Giant Pepper**  
**Roselle**

### RECENT INTRODUCTIONS OF MERIT WHICH PROMISE TO BECOME BIG MONEY MAKERS

**Golden Hybrid Casaba**  
**Golden Honey Casaba**  
**Small White Snap Beans**  
**The Home Tomato**  
**Early Stone Tomato**

One Pkt. Each of Five Recent Introductions, 25c



The Auto Truck, with the Good Roads, has added much to the general betterment of marketing produce of every kind, and makes it possible for the grower remote from the shipping point to compete with the grower nearby. Distance from the market is now given little consideration. The main thing is to grow the right variety at the right time for the purpose intended.



# The Home Vegetable Garden

Write Department of Agriculture, Washington, D. C., for Farmers Bulletin No. 255. Also No. 818. They are free.

## A BIG HOME GARDEN

Is the best and biggest money saver and the largest producer of money-saving food supplies you can have. Plant a good big home garden.

Thanks to the very commendable work of agriculture now directed at the public schools throughout the country, we look to see better conditions prevail in the homes.

Many a capable man with good intentions would have a garden if he only knew the simplest "first aids" to gardening. The next generation will know, and because they know, their homes will be more beautiful, and they will be more prosperous, for a good garden will supply possibly all and more vegetables than the family will consume. A very small plot of ground will do wonders toward giving the family more and better vegetables, besides reducing greatly the cost of living, and making better men and women of our boys and girls.

To encourage this kind of improvement for country homes, that life may be more enjoyable to the newcomer, unaccustomed to the solitude—

To encourage the city wives and daughters to transform unattractive homes into beautiful cozy spots that may well be the envy of their more wealthy neighbors, (such beauty spots always proclaim louder than words the refinement and culture of the people living there)—

To encourage the more youthful members of the household and to co-operate with the teachers where gardening is taught—

It is to aid this work that we have made of this catalog a veritable encyclopedia for the gardener and rancher. We are offering at reduced price the special collections of flower and garden seeds, selected for their adaptability to the Southwest and for their suitability to the average home.

## A Few Words About Irrigating

In seed beds where small seeds are sown thickly, it is necessary to sprinkle the beds, never flood them. During the winter months, sprinkle only in the morning when the water is warmer than the dew. This allows all the heat that accumulates in the soil during the day to be retained far into the night. During the hot summer months, it will be necessary to sprinkle in the evening to revive the plants after a hot day.

When making a garden, whether for drilling or planting seed, or setting plants, always wet the ground thoroughly. GIVE IT A GOOD SOAKING TO A DEPTH OF TWO OR THREE FEET OR MORE. As soon as it is tillable—that is as soon as it can be spaded and pulverized, or when the soil will not stick to the spade—dig it ten to twelve inches deep, put stable manure into every other furrow and turn it under. This is needed for humus and fertilizer, either in sandy or loamy soil, and more especially in adobe soil. Pulverize the soil thoroughly and rake it evenly. While it is still moist, plant seed from one-fourth inch to one inch deep, in heavy soil, and a little more deeply in sandy soil. Planted this way, almost any variety of seed will germinate and show above the ground in from four to ten days, without irrigation. Never sprinkle a new garden before the plant is above ground, nor after, if you can irrigate between the rows. It is far better to irrigate than to sprinkle, and much less labor. Always mulch the soil after each irrigation, as soon as it mulches readily, but no sooner. To allow the soil to bake after irrigation is far worse than no irrigation at all.

To sprinkle the garden slightly each day during the summer months is of little value unless the ground is also thoroughly irrigated once each week or two, according to the nature of the soil. Slight sprinkling refreshes the foliage, but may not penetrate the soil more than one inch deep. Thus as the under soil dries, the roots get no moisture. The plants suffer, and you do not suspect the cause because you sprinkle each day. This is a common fault and the cause of many failures.

### Aggeler & Musser Seed Co's Garden Vegetable Collection 7 Packets 25c

1 Pkt. Beet, Egyptian .....	\$.05
1 Pkt. Carrot, Danver Half Long .....	..05
1 Pkt. Lettuce, Iceberg .....	..05
1 Pkt. Onion, Silver King .....	..05
1 Pkt. Radish, Icicle .....	..05
1 Pkt. Tomato, Home .....	..05
1 Pkt. Turnip, Purple Top Globe .....	..05

\$ .35

For 25 cents we will send the above 7 full-size packets of seed by mail, postpaid—No changes will be allowed in this collection—No others will be sold at these prices.



A Big Home Vegetable Garden

The picture illustrates what one may do in a comparative small garden. All of these vegetables were grown in the garden of the Loma Linda Sanitarium. The same has been reproduced on a larger scale in the garden at the Soldiers' Home.

We recommend that gardeners for large ranches, sanitariums and public institutions consult these pages and emulate this garden.

## A Word About Sowing Seeds

Many seeds are small and the germination weak, therefore, sow them very shallow, often not more than one-eighth inch deep. This is because the germ or sprout must have air and light. If this is denied by too deep sowing, it dies before it reaches the surface.

In order to assist small or weak seeds to grow, it is advisable to plant plentifully, because the many seeds will give strength to raise the soil where one could not do so.

This advice applies particularly to beet and melon seeds, but is applicable to all small seeds. It is easy to thin out the surplus plants. A good general rule is to plant seeds to a depth equal to from three to five times their diameter.

We have received so many letters of appreciation of our last catalog that we are encouraged to continue the features which have been of greatest benefit to our patrons.

The hundreds of letters which come to our information department indicate the wide and intelligent interest in agriculture which is now as never before being shown in the city, as well as by the rural population.

### Aggeler & Musser Seed Co's Half- Dollar Vegetable Collection 15 Packets 50c

1 Pkt. Beans, Kentucky Wonder Wax .....	..05
1 Pkt. Beet, Egyptian .....	..05
1 Pkt. Cabbage, A. & M. Ey. Drumhead .....	..05
1 Pkt. Carrot, Danver Half Long .....	..05
1 Pkt. Casaba, Hybrid .....	..05
1 Pkt. Corn, Oregon Evergreen .....	..05
1 Pkt. Cucumber, White Spine .....	..05
1 Pkt. Lettuce, Iceberg .....	..05
1 Pkt. Muskmelon, Tip Top .....	..05
1 Pkt. Onion, Prizetaker .....	..05
1 Pkt. Peas .....	..05
1 Pkt. Radish, Icicle .....	..05
1 Pkt. Squash, Italian .....	..05
1 Pkt. Turnip, Purple Top Globe .....	..05
1 Pkt. Watermelon, Klondike .....	..05

\$ .75

For 50 cents we will send the above 15 packets of seed by mail, postpaid—No change will be allowed in this collection—No others will be sold at these prices.



# School Gardening Made Easy



Boy Graduates, June 1917



Girl Beginners, Nov. 1917

## NOTICE

Your attention is directed to the following pages, all of which contain instructions and information directly concerned with your work as beginners: Read Pages 5, 6, 7, 8, 9, 10. See "Market Gardening" on page 27.

School gardeners may find a ready market for any produce they will grow, at the nearest municipal market or at the nearby grocery stores. We wish to suggest a committee on marketing be appointed from among the boys to attend to the marketing. This experience would prove a good experience and a valuable education along that line.

## SCHOOL GARDEN WORK

The very commendable common sense system now adopted by many schools throughout the Southwest has suggested to us the idea of giving to the teachers and the pupils the benefit of the knowledge gathered in our twenty-four years of experience with gardening in the Southwest. We have therefore put into brief form but comprehensive information suitable to the requirements of pupils in their garden work as beginners.

There are two kinds of soil in California that baffle the new gardener, and often puzzle the man of experience. One kind is the raw un-reclaimed soil that packs so hard that vegetation cannot take root. The other is soil as pliable as sand, and ought to grow anything but just will not. Both require the same solution. They need life (humus) and there is nothing better to put life into soil than stable manure or a green manuring crop plowed under at the right time. To thoroughly air the soil by cultivation.

For your garden gather weeds and dig them under. If there is no stable manure available, any decaying vegetation plowed under will add humus. For the field, grow rye, vetch, melilotus, or barley during the winter months, and in the spring plant sorghum, Sudan and cow peas. All these crops will furnish feed for the stock as well.

To grow well a plant requires a deep, mellow, moist soil, supplied with the right amount of air, heat and available plant food. An important step, then, in the successful growing of vegetables is to prepare the soil in such a way that it will be congenial to the best root growth. The soil for truck crops is a rich sandy loam—a soil containing varying proportions of clay, sand and organic matter. A good vegetable soil can be made in most back yards by intelligent management.

First give the soil a good soaking, wetting it down two or three feet deep. As soon as it can be handled without sticking to the spade, dig ten or twelve inches deep, turning the soil over and pulverize it thoroughly. Then make ridges to stand about six inches high, flattened to about ten inches wide on top and twelve inches between ridges, drill the seed or transplant on each side of the ridge. Irrigate in the furrow between the ridges. By this method two rows are irrigated with one furrow, and you will have only one furrow to cultivate after each irrigation. It is easy to see the advantage of this method over the usual way of drilling on level ground and irrigating each row, often flooding the plant, which is harmful, particularly during the heat of summer.

## A Hint for the School Garden Work

During the past year the School Gardens and the Home Garden Committee of Los Angeles have grown for free distribution more than one million plants.

It was rightly suggested that more than 75% of the seeds planted by amateurs never develop to maturity. The first six weeks of plant life are the most trying and they need the most skillful attention which the average home gardener cannot give and, therefore, becomes discouraged. The school children are growing in their school gardens, plants of all practical varieties for free distribution; this will do much toward encouraging home garden work by eliminating six weeks of the most trying period.

## Adobe Soil

How can adobe soil be made mellow? Through tillage of the soil, the application of organic matter and lime, and drainage, will all help to do this. Occasionally the addition of sand or fine gravel is needed.

## Clay and Adobe Need Skill

Of all the garden soils, clay is the most easily injured by tilling when it is not in the right condition as to moisture. If worked too wet, the particles all slide together into a compact mass. On the other hand, if worked too dry, the clods are hard to break. When clay soil is in the right condition to work it will crumble apart if squeezed in the hand. If it sticks together it is too wet. Clay soil should never be worked when it is wet, not even with a hoe. This is an important lesson for all gardeners.

In a deep, mellow soil, the plants grow more quickly, since larger root systems can be developed and more food and moisture taken in. A deep, mellow soil affords a larger reservoir to hold rain needed during the drouths that come in the growing season. Such a soil is warmer and contains air needed for the growing roots and for the bacteria that cause decay of organic matter or gather nitrogen from the soil air.

## READ

This catalog commemorates our Twenty-fifth Anniversary. We decided we could do no better service than to give special stress to the school garden work, now so ably carried out in conjunction with our common school education. The name of the founder of this branch of education should go in history with that of Thaddeus Stevens, the founder of our Public School System. The teacher of Agriculture in the public schools will do more for the betterment of humanity than any other branch of education.

With this idea in view we have made of this catalog, a primer for the school garden work. Pages from 1 to 12 may well be entitled "First Lessons In Gardening."

The correspondence in Agriculture, (See page 7) may be considered the last or highest lessons in Agriculture. Look for the sign "Read" and then read what follows. You may find just the information you are looking for.

Back yards and vacant lots of New York, cultivated principally by housewives and children, grew \$675,000 worth of produce during the last summer.

# A & M School Garden Collection 30 Packets for \$1.00

1. Beet, Egyptian
2. Beans, Kentucky Wonder
3. Beans, Stringless Green Pod
4. Beans, Fordhook Lima
5. Cabbage, Early Drumhead
6. Celery, Golden Self Blanching
7. Carrot, Oxheart
8. Corn, Oregon Evergreen
9. Cucumber, White Spine
10. Cucumber, Lemon

11. Casaba, Hybrid
12. Egg Plant, New York Improved
13. Lettuce, Iceberg
14. Muskmelon, Tip Top
15. Watermelon, Chilian
16. Onion, Prizetaker
17. Okra, White Velvet
18. Peas, Strategem
19. Pepper, Anaheim Chili
20. Pepper, Chinese Giant

21. Pumpkin, Boston Pie
22. Radish, Long Scarlet
23. Radish, Large Japanese
24. Rhubarb, Winter Crimsom
25. Salsify, Sandwich Island
26. Spinach, Bloomsdale
27. Squash, Hubbard
28. Squash, White Bush Scallion
29. Turnip, Purple Top Globe
30. Tomato, Beefsteak

For \$1.00 we will send the above 30 full-sized packets of seed by mail, postpaid—No changes will be allowed in this collection. No other packets will be sold at these prices.



## Demonstration Garden in a City Park

In compliance with the wishes of President Wilson and Governor Stephens, the District Fair Association, by and with the consent and cooperation of the Sixth District Agricultural Association and the City Park Commissioners, created a demonstration garden in Exposition Park for the growing of plants and produce, thereby elaborating and aiding the home and school garden movement throughout the city. The last report from the gardener in charge of this demonstration garden shows the following:

**Report Covering Demonstration Garden at Exposition Park, Los Angeles, August 15th to October 15th, 1917.**  
**Product Grown for Free Distribution**

	Plants	Mature
Beans, Lima .....	24,150	35 lbs.
Beets .....	500	471 bunches
Brussels Sprouts .....	22,705	
Cabbage .....	11,985	25 heads
Cauliflower .....	2,420	
Chard .....	9,550	
Collards .....	7,700	
Kale .....	2,400	
Kohl Rabi .....	4,630	
Lettuce .....	16,200	324 heads
Mustard .....		547 bunches
Onions .....	186,100 sets	30 bunches
Potatoes .....		25 lbs.
Peanuts .....	150	
Radishes .....		4710 bunches
Roselle .....	120	
Spinach .....		110 bunches
Squash (Summer) .....		1512 lbs.
Sweet Corn .....		1428 ears
Tomatoes .....	15,000	660 lbs.
Turnips .....		366 bunches

Total ..... 303,610\* Value \$200.00

\* Plants valued at 5c per dozen \$1,265.05, which covers the season up to October 15th, 1917.

So pleased are the authorities they have voted to continue this garden indefinitely.

At the above date,—October 15th,—there was growing as many plants as had previously been distributed. Altogether about \$2500.00 worth of plants and produce have been grown at an expense of about \$500.00, of which \$300.00 was expended in equipment, preparation of the soil, and seeds. This has demonstrated that by eliminating the mature products and growing plants only, about 500,000 plants can be re-produced every two months on one-half acre of ground at an expense of about \$250.00.



Onion plants for free distribution at the Demonstration Garden



Demonstration Garden, Mr. Ross Gast, Gardener  
(See Market Gardening Page 27)

## THE COUNTY FARM BUREAU

Now that Farm Advisors have been appointed in many counties, and appointments are being contemplated by other counties, it is well that you know just what it means,—in what way you may benefit by this Farm Advisor. Write the University of California, College of Agriculture, Berkeley, California, and ask for circular No. 166, entitled "The County Farm Bureau," by B. H. Cochran.

### WHAT HAS BEEN ACCOMPLISHED BY ONE FARM ADVISOR IN TEXAS

Two years ago there was appointed a "Farm Demonstrator," for Webb County, Texas. As a part of his plan of rendering service, he encouraged the farmers and truck growers to report on their troubles and disappointments, each week, in order that he might make specific investigations as to causes for failures, and recommend methods for avoiding them in the future. In one of the many cases which shows well defined results, the farmer had apparently as fertile and productive a soil as his neighbors, and yet he had failed with his bean crop, and also a greatly reduced yield in his onion crop.

Upon investigation it was found that the bean crop had been rendered practically unprofitable on account of a very serious infestation of the soil with eel worm, which produced knots on the roots, and gives the popular name of "root knot" to the condition of the roots. Later investigations showed that the Bermuda onion, both the wax and the yellows, are subject to attack from this pest, and accounted in some measure at least, for the greatly reduced yield of onions, where a bumper crop should have been secured. This grower had lost heavily by these failures of the crops mentioned, but through the advice given by this Farm Advisor, he arranged a system of crop rotation with immune plants, which crops have not only been highly profitable, but his land is being gradually cleared of this pest. He has had bumper crops, has made great profits on them, and has saved himself financially. By changing his onion crops to eel worm free land he has won prosperity instead of threatened ruin.

Again, the first year of marketing Bermuda onions, after this Farm Advisor had been appointed, threatened to be disastrous. This Advisor at once began to perfect a working basis for a marketing test in co-operation with the Bureau of Markets of the U. S. Department of Agriculture. A branch market report service, in the nature of an exchange, but making all market news service official, was inaugurated by the joint co-operation of the Bureau, the onion growers, and the Farm Advisor. This service saved the market to such an extent, that it was repeated the second year with still better results. Each year a threatened disaster was averted, and more than a million dollars saved to the Webb County onion growers through this two years of Market Service. Moral: Work in constant close co-operation with your Farm Advisor

## CORRESPONDENCE COURSE IN AGRICULTURE

No person in the agriculture game is too old to learn; indeed, if you wish to keep up with the latest methods that have added so much to the production of the ranch and to the comfort of the rancher, you should write to the—

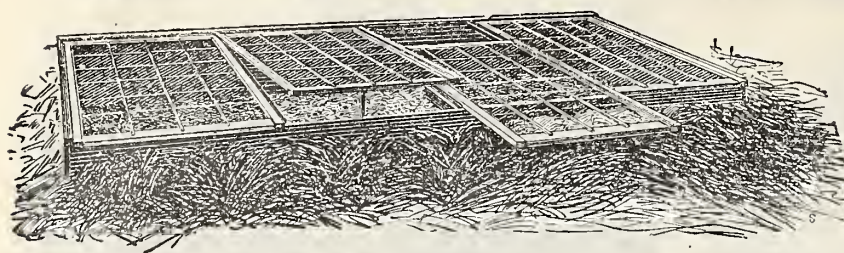
DIVISION OF AGRICULTURAL EDUCATION,  
University of California,  
Berkeley, California

—and ask for Circular No. 113, entitled, "Correspondence Course in Agriculture," by W. G. Hummel.

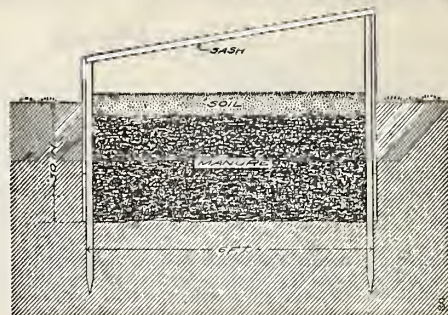
This circular explains fully how to proceed to take instructions in one or more of thirty-eight subjects. Send at once for circular 113.



# How to Make a Hotbed, Cold Frame and Lath House



Hot Bed



Cross-Section of Hot Bed

Every garden should have a hot bed in a sunny corner for the purpose of raising plants for early vegetables.

Dig a trench east and west twelve to eighteen inches deep. A bed three feet wide and ten feet long is large enough for any family garden. Board twelve inches high on the north side and six inches high on the south side. Fill twelve inches deep with strawy manure or weeds, moisten slightly, pack tightly, cover three inches deep with sandy loam; if the loam is mixed with some finely sifted sheep manure or leaf mould, it will greatly improve it. Sow the seed in rows across the hot bed north and south so that the sun will light both sides of the row during the day, making strong, healthy plants. Do not sow too thickly nor more deeply than one-fourth inch. Cover the hot bed with glass, not muslin. No less than twelve inches should exist between the glass and the soil, because plants must have air. Sprinkle always in the morning, or, if necessary to do so in the evening, use warm water. Sprinkle sufficiently to moisten the soil, but not enough to flood the manure, which would then become chilled and be worse than no manure at all. Raise the glass during the day, and close at night. Without ventilation the plants may be scalded during a warm sunny day. Before transplanting from the hot bed, all plants should be

hardened by exposing them to the sun for several days. Exercise proper judgment, lest they be destroyed.

## LATH HOUSE

Lath houses are used to protect plants against the extreme heat, cold or winds. Four-foot laths nailed into frames on 1 in. by 3 in. by 12 feet, pine, are used. The height of a lath house varies from 8 to 12 feet. Lath houses are used for starting seedlings, cuttings, and the growing of ferns, smilax and asparagus strings. They are also used to shelter young plants and to transplant tender stock in boxes.

Lath houses in Southern California contain some very fine collections of ferns, begonias and palms. Lath houses can be made in any style to conform with other buildings. We do not recommend the use of lath houses for vegetable plants, but we find it very valuable in the propagation of eucalyptus, cypress, acacia and most all evergreen shrubs and trees.

## NUMBER OF PLANTS TO AN ACRE

Set at regular distances apart

Distance apart.	No. plants	Distance apart.	No. plants	Distance apart.	No. plants
3 in. by 4 in.	522,720	4 1/2 ft. by 4 1/2 ft.	2,150	14 ft. by 14 ft.	222
4 in. by 4 in.	392,040	5 ft. by 1 ft.	8,712	15 ft. by 15 ft.	193
6 in. by 6 in.	174,240	5 ft. by 2 ft.	4,356	16 ft. by 16 ft.	170
1 ft. by 1 ft.	43,560	5 ft. by 3 ft.	3,904	16 1/2 ft. by 16 1/2 ft.	160
1 1/2 ft. by 1 1/2 ft.	19,360	5 ft. by 4 ft.	2,178	17 ft. by 17 ft.	150
2 ft. by 1 ft.	21,780	5 ft. by 5 ft.	1,742	18 ft. by 18 ft.	134
2 ft. by 2 ft.	10,890	5 1/2 ft. by 5 1/2 ft.	1,440	19 ft. by 19 ft.	120
2 1/2 ft. by 2 1/2 ft.	6,960	6 ft. by 6 ft.	1,200	20 ft. by 20 ft.	108
3 ft. by 1 ft.	14,520	6 1/2 ft. by 6 1/2 ft.	1,031	25 ft. by 25 ft.	69
3 ft. by 2 ft.	7,260	7 ft. by 7 ft.	888	30 ft. by 30 ft.	43
3 ft. by 3 ft.	4,840	8 ft. by 8 ft.	680	33 ft. by 33 ft.	40
3 1/2 ft. by 3 1/2 ft.	3,555	9 ft. by 9 ft.	537	40 ft. by 40 ft.	27
4 ft. by 1 ft.	10,890	10 ft. by 10 ft.	435	50 ft. by 50 ft.	17
4 ft. by 2 ft.	3,630	11 ft. by 11 ft.	360	60 ft. by 60 ft.	12
4 ft. by 4 ft.	2,722	12 ft. by 12 ft.	302	66 ft. by 66 ft.	10

**Rule.**—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill; which divided into the number of square feet (43,560), will give the number of plants to the acre.

## AGRICULTURAL BOOKS

	Price	Pstpd.		Price	Pstpd.
A. B. C. of Agriculture, by Weld.....	.50	.55	Garden Helps, by Hall.....	.75	.85
Alfalfa, by Coburn .....	.50	.60	Gardening in California Landscape and Flower, by McLaren .....	3.75	4.00
Art of Propagation, by Jenkins.....	.25	.30	Ginseng, Kain's Book on.....	.50	.60
Asparagus, by Hexamer .....	.50	.60	Insects and Insecticides, by Webb.....	1.50	1.65
Avocado Industry, by Popence.....	.15	.20	Irrigation Farming, by Wilcox.....	2.00	2.20
Bean Culture, by Sevey.....	.50	.60	Irrigation for the Farm, Garden and Orchard, by Stewart .....	1.00	1.10
Cabbage and Cauliflower, by Allen.....	.50	.60	Mushroom Culture, by American Spawn Co.....	.35	.40
California Fruit and How to Grow It, by Wickson .....	3.00	3.20	New Onion Culture, by Grenier.....	.50	.60
California Vegetables, by Wickson.....	2.00	2.15	Onion Culture .....	.20	.25
California Garden Flowers, Shrubs, Trees and Vines .....	1.50	1.60	Peanut Culture, by E. W. Jones.....	.50	.55
1000 Questions in California Agriculture Answered, by Wickson .....	1.50	1.60	Potatoes, by Fraser .....	.75	.85
Celery Culture, by Beattie .....	.50	.60	Pruning, by Bailey .....	1.50	1.75
Cereals of the United States, by Hunt.....	1.75	1.85	Rhubarb Culture, by J. W. Morse.....	.50	.60
Chrysanthemums, by Herrington .....	.50	.60	Roeding's Planters' Guide .....	.25	.30
1905 Dry Farming, by Campbell.....	.50	.60	Soils, by Burkett .....	1.25	1.40
1907 Dry Farming, by Campbell.....	2.50	2.60	Spraying Crops, by Weed.....	.50	.60
Farm Grasses of the United States, by Spillman.....	1.00	1.10	Strawberry Culture, by A. S. Fuller.....	.25	.30
Fertilizers, by Gregory.....	.50	.60	Sweet Potato Culture, by Fitz.....	.50	.60
Flax Culture .....	.30	.35	Talks on Manures, by Harris .....	1.50	1.60
Forage Crops, by Shaw.....	1.00	1.10	Tobacco Culture .....	.25	.30
Garden Beautiful in California, by Braunton.....	1.00	1.10	Tomato, by Tracy .....	.50	.60
			Tomato Culture, by Root .....	.35	.40

## LITERATURE FOR POULTRYMEN

	Price	Pstpd.		Price	Pstpd.
American Standard of Perfection (1915).....	2.00	2.20	Poultry Architect .....	.50	.60
Artificial Incubation and Brooding .....	.50	.60	Poultry Remedies .....	.25	.30
Barred, White, Buff, Plymouth Rocks.....	.50	.60	Profitable Poultry Farming.....	.25	.30
Bantam Fowl .....	.50	.60	Pacific Coast Rabbit Book.....	.25	.30
Broilers and Squabs .....	.50	.60	Rhode Island Reds.....	.75	.85
Capons for Profit .....	.50	.60	Successful Poultry Keeper.....	1.00	1.10
Diseases of Poultry .....	.50	.60	The New Egg Farm .....	1.00	1.15
Duck Culture, by Rankin.....	.75	.85	Turkeys, All Varieties .....	.75	.85
Ducks and Geese .....	.75	.85	Two Hundred Eggs Per Year—How to Get Them .....	.50	.60
Leghorns, Brown, White and Buff.....	1.00	1.10	The Wyandottes .....	.50	.60
National Standard Squab.....	1.00	1.10	Western Poultry Book .....	1.00	1.10
Poultry Houses and Fixtures .....	.50	.60			



**A TREATMENT CALENDAR** for tree and plant troubles designed for conditions in the Southwest. Timely portions printed in Weekly Rural World each month with seasonal suggestions up to date.

# All-Year War Chart

**Against Insect and Disease  
Enemies of Grove and Garden**

**SAVE THIS CALENDAR** for your scrapbook. This Calendar is needed nearly every month of the year, therefore do not destroy it. This Catalogue contains valuable information; keep it.

DISEASE OR INSECT	REMEDY	TIME TO TREAT
<b>CITRUS—ORANGE, LEMON AND POMOLO</b>		
The scales, black, red, yellow, purple and greedy.	Fumigation formula No. 1.	Sept. 1st to Feb. 1st. Oct. and Nov. best.
Citricola (soft gray) scale.	Formula No. 1.	Aug. and Sept.
Mealy bugs. Formulas Nos. 2 and 3 give some benefit, but inferior to No. 1.	Form. No. 1, repeating in a month and again if required, using $1\frac{1}{2}$ ordinary dose.	Whenever the insects appear.
Red spider, also fungus troubles and young scale.	Lime sulphur spray 32 degrees, $2\frac{1}{2}$ per cent; or fine, dry sulphur applied when trees are damp.	March 1 to Oct. at first appearance of red spider.
Gum disease and scaly bark.	Formula No. 4. <b>BROWN ROT</b> —Bordeaux mixture applied to lower branches and soil beneath after cleaning up and cultivation.	At first appearance. March, April and May.
<b>PEACH, NECTARINE, PLUM AND ALMOND</b>		
Shot hole fungus, peach blight, San Jose scale and spider mites.	Lime sulphur spray 32 degrees, 10 per cent strength.	As soon as leaves have fallen in early winter.
Peach leaf curl.	Bordeaux mixture, winter strength.	
Peach twig borer (wormy peaches) and San Jose scale.	Lime sulphur spray 32 degrees.	Just before buds swell in spring.
Black peach aphid.	Formula No. 3, adding 1 oz. 40 per cent nicotine sulphate (black leaf 40 min.) to seven gallons. Soaking similar amount as top receives into soil over roots.	When new growth starts and first insects appear, repeating as needed.
Tobacco, wood ashes and blue stone applied to soil over roots are helpful.		
<b>APPLE</b>		
San Jose and other scales, spider mites and fungi.	Lime sulphur spray 32 degrees, 10 per cent strength.	During winter while trees are free from leaves
Codling moth and various caterpillars.	Formula No. 5 applied downward. Repeat in ten days and again in two weeks.	After first bloom has fallen and before calyx cups are closed.
Woolly aphids.	Same treatment as for black peach aphid.	Whenever insects appear.
<b>PEAR</b>		
San Jose scale, spider mites.	Lime sulphur spray 32 degrees, 10 per cent.	During winter when trees are bare.
Pear blight. Dip shears after each cut into water having 1 part to 1000 added of corrosive sublimate or 1 to 240 of 40 per cent formaline.	Cut out every appearance of the disease on twigs, branches or trunk well down into healthy wood.	All the year, but especially the later winter.
<b>SMALL FRUITS</b>		
Mildew on grape.	Fine dry sulphur applied when vine is damp.	When shoots are foot long; in mid-summer, also just as fruit is ripening.
White rose scale on bush berries.	Formula No. 3; scrub bad cases if necessary with the liquid.	After leaves have fallen. Repeat if necessary.
Orange fungus and anthracnose.	Bordeaux mixture, summer strength; cut out parts showing spores.	In spring and summer.
<b>ROSES</b>		
Aphis (plant lice).	Formula No. 3, adding 40 per cent nicotine sulphate 1 oz. to 7 gals.	Spring and summer.
Rose scale and orange fungus.	Same as for bush berries.	Spring and summer.
Mildew.	Fine dry sulphur to damp leaves.	Spring and summer.
<b>VEGETABLES</b>		
Rust on asparagus.	Bordeaux mixture, summer strength, or dry sulphur.	After cutting season and every ten days until fall
Plant only resistant plants.	Fine dry sulphur or lime sulphur is good.	
Spider mites on beans, causing rusty appearance.	Same as for rose aphid.	Spring and summer at first appearance of insects
Aphis (plant lice).	Formula No. 5 until heading begins, then use powdered hellebore.	When first worms or white butterflies appear.
Green worm on cabbage, cauliflower or kohlrabi.	Formula No. 6 or boards laid between rows to be turned over in morning and worms beneath killed.	Appearance of lice.
Cut worms on any plant. May hunt worms at night with light.	Same as for rose aphid.	Very first appearance of insects and repeated as needed.
Aphis (plant lice).	Same as for rose aphid, applied to lower side of leaves.	When the first lice appear.
Aphis (plant lice) on cantaloupe, cucumber, squash.	Hand picking of first bugs that come before young are hatched. Wood ashes or lime help some.	At very first appearance of mildew and repeat as necessary.
Squash bugs and cucumber beetles. May cover young plants with screen top box.	Same as for rose aphid.	Before planting.
Aphis (plant lice) on peas.	Fine dry sulphur on damp leaves. Lime sulphur also good.	When crop is nearly ripe.
Mildew on peas.	Soak 1 hour in solution 40 per cent formula. 1 pint to 25 to 30 gallons water.	When dug.
Scab and other fungi on potato seed.	Keep well covered to prevent tuber moth access through cracks in soil.	When first worms appear.
Tuber moth on potato.	Always protect tubers from moth at night.	In spring and summer. When they appear.
Tomato worms.	Pick off by hand or before fruit is half grown use Formula No. 5.	
Slugs and snails on many vegetables and flowers.	Same as for cutworms. Wood ashes and lime when fresh help some.	

**FORMULA NO. 1—Fumigation.** Multiply distance over tented tree by distance around; "point off" last two figures. Three-fourth of this amount is number ounces Sodium Cyanide required. For each ounce cyanide use  $1\frac{1}{2}$  ounces Sulphuric Acid in two ounces water. Place latter in deep dish under tent; drop in cyanide, close quickly, leave one hour. Do not breathe gas.

**FORMULA NO. 2—Mermaid or Gold Dust washing powder.**.....1 lb.  
45 degree distillate (like used in auto).....1 pint  
Water.....4 gals.  
Mix well and spray with strong pressure.

**FORMULA NO. 3—Distillate (30 degrees Baume)**.....1 gal.  
Soap (Wheat oil is best)..... $1\frac{1}{2}$  lbs.  
Water to make.....12 gals.

Dissolve soap in a convenient amount of boiling water; set off fire, and at once stir in the distillate, then add the balance of the water.

**NOTE**—If only one-tenth or one-twentieth of the amount in these formulas is

**FORMULA NO. 4**—Dissolve 1 lb. blue stone in one gallon water in a wooden or earthen vessel by hanging it in a sack in the top of the water. Then slack 2 pounds of fresh lime in  $\frac{1}{2}$  gallon water and when cool mix the two solutions, making them about like whitewash. Apply with a brush.

**FORMULA NO. 5**—Arsenate of lead paste.....6 lbs  
(or half as much powdered arsenate of lead)  
Wheat flour (stirred into water).....4 lbs.  
Water.....100 gals.  
(1 oz. of the paste or  $\frac{1}{2}$  oz. of powder to 1 gal. of water.)  
This spray must be well agitated while using.

**FORMULA NO. 6—Poison Bait.** Wheat bran 5 lbs. White arsenic 4 oz. (or Paris green, 8 oz.). Mix well, then add 1 lemon chopped fine. Moisture to make adhere, with well sweetened water.

needed then reduce the amount of each ingredient in proportion.



# VEGETABLE GARDEN CALENDAR FOR OUT-DOOR PLANTING 300 Questions Answered On This Page

Owing to the diversity of the soil and climatic conditions of the great Southwest, it is impractical to follow without some deviation any table that might be formulated. We believe this table is as nearly correct as any table can be made, yet the time of planting must vary with each season, and so seldom are the seasons at all similar that there is always an element of risk for the man who plants early. Each month, too, requires certain varieties best suited to the season and purpose for which it is planted.

KIND	SEED FOR 1 ACRE	SEEDS FOR 100 FEET OF ROW	DISTANCE APART FOR HAND CULTIVATION		DEPTH OF PLANTING (*2)	TIME OF PLANTING (*3)	READY FOR USE AFTER PLANTING (*4)
			ROWS APART (*1)	APART IN ROW (*1)			
*Artichoke	1 lb.	1 oz.	4 ft.	3 ft.	1 in.	Apr. to July	8 mos.
*Asparagus Seed	3 lbs.	1 oz.	1 to 2 ft.	3 to 5 in.	1 in.	Feb. to May	2 years.
*Asparagus Plants	14,000	60 to 80	2 to 3 ft.	15 to 20 in.	6 to 10 in.	Dec. to Mar.	1 year.
*Beans, Bush	25 to 50 lbs.	1 lb.	1½ to 2 ft.	4 in.	1 to 2 in.	Mar. to Sept.	2 to 3 mos.
*Beans, Pole	25 to 40 lbs.	½ lb.	3 to 4 ft.	3 ft.	1 to 1½ in.	Mar. to July	2 to 3 mos.
*Beets, Table	10 to 15 lbs.	2 oz.	1 to 1½ ft.	3 to 4 in.	½ to 1 in.	All the year	3 to 4 mos.
*Brussels Sprouts	½ lb.	¼ oz.	1½ to 2 ft.	1½ to 2 ft.	½ in.	All the year	4 to 5 mos.
*Cabbage	½ lb.	¼ oz.	2½ ft.	1 to 2 ft.	½ in.	All the year	5 to 6 mos.
*Carrot	4 lbs.	¼ oz.	1 to 2 ft.	3 to 4 in.	½ in.	All the year	3 to 4 mos.
*Cauliflower	½ lb.	1 oz.	2½ to 3 ft.	1½ to 2 ft.	½ in.	July to Jan.	4 to 5 mos.
*Celery	¼ lb.	¼ oz.	1½ to 3 ft.	6 in.	½ in.	Jan. to May	4 to 5 mos.
*Corn, Sweet	10 lbs.	½ lb.	3 to 4 ft.	12 in.	1 in.	Mar. to Aug.	2 to 3 mos.
*Cucumbers	3 lbs.	½ oz.	4 ft.	1 ft.	1 in.	Mar. to Sept.	2 to 3 mos.
*Egg Plant	¼ lb.	1-3 oz.	3 to 2½ ft.	1½ to 2 ft.	½ to 1 in.	Dec. to July	3 to 4 mos.
*Kale, or Borecole	½ lb.	1 oz.	1½ to 2 ft.	1 to 2 ft.	½ in.	All the year	3 to 4 mos.
*Kohi-Rabi	3 lbs.	¼ oz.	1½ to 2 ft.	4 in.	½ in.	All the year	3 to 4 mos.
*Lettuce	3 lbs.	½ oz.	1½ to 2 ft.	6 to 8 in.	½ in.	All the year	3 to 4 mos.
*Melon, Musk	1 lb.	½ oz.	4 to 6 ft.	6 to 8 in.	1 in.	Mar. to July	3 to 4 mos.
*Melon, Water	1 lb.	1 oz.	6 to 8 ft.	8 to 10 ft.	1 in.	Mar. to June	3 to 4 mos.
*Okra	6 lbs.	1 oz.	2 ft.	1 ft.	1 in.	Apr. to July	4 mos.
*Onion Seed	3 lbs.	1 oz.	1 to 1½ ft.	½ to 3 in.	½ to 1 in.	Aug. to Apr.	3 to 6 mos.
*Onion Sets	250 lbs.	2 lbs. sets	1 to 1½ ft.	2 to 2½ in.	1 in.	All the year	4 to 5 mos.
*Parsley	2 lbs.	¼ oz.	1 to 1½ ft.	3 to 4 in.	½ in.	All the year	5 to 6 mos.
*Parsnip	4 lbs.	½ oz.	1½ to 2 ft.	3 to 4 in.	½ to 1 in.	All the year	4 to 5 mos.
*Peas	60 lbs.	½ lb.	2½ to 3 ft.	2 in.	2 to 3 in.	All the year	4 to 5 mos.
*Pepper	½ lb.	¼ oz.	1½ to 2 ft.	15 to 18 in.	½ in.	Dec. to July	3 to 4 mos.
*Potatoes, Irish	600 lbs.	5 lbs.	2 to 3 ft.	12 to 15 in.	4 to 8 in.	Jan. to Sept.	2 to 3 mos.
*Potatoes, Sweet	12,000	3 lbs.	3 to 5 ft.	1 in.	3 in.	Mar. to July	3 to 4 mos.
*Pumpkin	1 lb.	½ oz.	6 to 8 ft.	6 to 8 ft.	1 to 1½ in.	Mar. to Aug.	3 to 4 mos.
*Radish	12 lbs.	1 oz.	1 to 1½ ft.	1½ to 2 in.	½ in.	All the year	1 to 2 mos.
*Rhubarb Plants	5,000	33 plants	3 to 5 ft.	3 ft.	2 to 3 in.	Dec. to May	2 to 3 mos.
*Salsify	6 lbs.	1 oz.	1½ to 2 ft.	2 to 4 in.	1 to 2 in.	All the year	3 to 4 mos.
*Spinach	30 lbs.	1 oz.	1½ to 2 ft.	2 to 4 in.	1 in.	All the year	3 to 4 mos.
*Squash, Summer	2 lbs.	¼ oz.	3 to 4 ft.	3 to 4 ft.	1½ in.	Feb. to Sept.	2 to 3 mos.
*Squash, Winter	1 lb.	½ oz.	7 ft.	7 to 9 ft.	1½ in.	Mar. to Aug.	3 to 4 mos.
*Tomato	½ lb.	¼ oz.	4 to 5 ft.	2½ to 3 ft.	½ in.	Dec. to July	3 to 4 mos.
*Turnip	3 lbs.	1½ oz.	1 to 2 ft.	3 to 4 in.	¾ to 1 in.	All the year	3 to 4 mos.

(1)—Distance apart varies with the season and soil.

(2)—Depth of planting varies with the season and condition of soil.

(3)—Time of planting varies according to local conditions with regard to temperature.

(4)—Time of maturity varies with the temperature and cultural conditions. This table shows required time of maturity after transplanting. It requires 6 to 8 weeks longer from time of sowing seed.

†—Drill and thin.

\*—Transplant.

‡—Plant in hills.

## SEEDS REQUIRED PER ACRE FOR FIELD CROPS IN SOUTHERN CALIFORNIA

VARIETY	NUMBER OF PLANTS OR AMOUNT OF SEED	HOW TO PLANT	AVERAGE APPROXIMATE YIELD	AVERAGE APPROXIMATE VALUE
Alfalfa	25 lbs. seed	Drill or broadcast	8 to 10 tons hay, or 600 lbs. seed	\$60; \$100 to \$166
Alfalfa	8 lbs. seed	Broadcast	3 tons hay, and pasture	
Barley	100 lbs. seed	Drill or broadcast	2 to 4 tons hay	\$35 to \$60
Beans, Bush	25 to 40 lbs.	Drill in rows 2 ft. apart	1500 to 2000 lbs.	\$60 to \$80
Beans, Lima	50 to 60 lbs.	Drill in rows 3 ft. apart	1500 to 2000 lbs.	\$75 to \$100
Beans, Windsor	100 lbs.	Drill in rows 2 ft. apart	Hog pasture and green manuring	
Beets, Stock	8 "	Drill in rows 2 ft. apart	20 to 25 tons of beets	\$100 to \$125
Buckwheat	45 "	Drill or broadcast	Green manuring	
Burr Clover	20 "	Drill or broadcast	Pasture and green manuring	
Canary	10 "	Drill or broadcast	1½ tons seed	\$75 to \$100
Cane, or Sorghum	4 "	Drill, or 40 lbs. broadcast	20 tons green fodder	
Carrots, Stock	4 "	Drill in rows 1½ ft. apart	20 to 25 tons of carrots	\$150 to \$200
Corn, Broom	10 "	Drill in rows 2 ft. apart	½ ton broom straw	\$50 to \$100
" Egyptian	10 "	Drill in rows 2 ft. apart	1½ tons grain	\$35 to \$45
" Ensilage	80 "	Drill in rows 1 ft. apart	30 to 50 tons	\$40 to \$60
" Field	10 "	Hills 2 ft. apart, rows 3 ft. apart	2 tons grain	\$90
" Kafir	10 "	Drill in rows 2 ft. apart	½ tons grain	
" Milo Maize	10 "	Drill in rows 2 ft. apart	1½ tons grain	
" Pop	6 "	Hills 1 ft. apart, rows 2 ft. apart	1 ton	
Cotton	5 "	Drill in rows 4 ft. apart	1 to 1½ bales and seed	
Cow Peas	25 "	Drill in rows 2 ft. apart	Pasture and green manuring	\$60
Feterita	10 "	Drill in rows 2 ft. apart	2 tons grain	\$65
Flax	60 "	Drill or broadcast	1½ tons grain	\$120
Foenugreek	35 "	Drill or broadcast	1 ton grain or green manuring	
Grass, Bermuda	8 "	Broadcast	Pasture (damp land)	
" Italian Rye	20 "	Broadcast	Hay and pasture (damp land)	
" Parra	40,000 stems	Plant in mud as rice, wet land	Cut 2 tons per acre 4 times per year	
" Paspalum	10 lbs.	Broadcast	Cut 1½ tons per acre 4 times (damp land)	
" Peren. Rye	20 "	Broadcast	Hay and pasture	
" Rhodes	10 "	Broadcast	Cut 2 tons per acre 3 times	
" Sudan	10 "	Broadcast	Cut 2 tons per acre 5 times	\$50
Hemp	60 "	Broadcast	Cut in 100 days for fiber	\$40
Oats	80 to 100 lbs.	Drill or broadcast	3 tons hay or 1 ton grain	\$40
Eye	60 "	Drill or broadcast	Pasture and green manuring, or 1 ton grain	\$40
Vetch	60 "	Drill or broadcast	Pasture and green manuring	\$40
Wheat	60 to 80 lbs.	Drill or broadcast	2 tons hay or 1 ton grain	\$40 to \$50

## SEEDS AND PLANTS PER ACRE FOR VEGETABLES

VARIETY	SEED	PLANTS	YIELD	VALUE
Asparagus	3 lbs.	10,000	Indefinite	Indefinite, \$200 to \$300
Beans, String	50 "	Drill	Indefinite	Indefinite, \$100 to \$300
Beets, Table	12 "	Drill	10 tons	Indefinite, \$300
Cabbage	2 "	Drill	10 tons	Indefinite, \$80 to \$100
Carrot	4 "	Drill	500 sacks	\$200 to \$400
Cauliflower	½ "	Drill	8,000 heads	\$150 to \$250
Celery	¼ "	23,000	2,000 doz.	\$300 to \$600
Corn, Sweet	10 to 20 lbs.	Hills	400 boxes	\$150 to \$300
Cucumber	3 lbs.	2,100 hills	Indefinite	\$75 to \$400
Egg Plant	¼ "	7,000	Indefinite	\$100 to \$300
Lettuce	3 "	40,000	500 crates	\$300 to \$600
Melons, Casaba	1 "	680 hills	Indefinite	\$75 to \$300
Melons, Musk	1 "	1,200 hills	Indefinite	\$75 to \$200
Melons, Water	1 "	435 hills	Indefinite	\$50 to \$250
Onion	3 "	250 lbs. sets	10 to 15 tons	\$100 to \$600
Peas	60 "	Drill	Indefinite	\$100 to \$400
Peppers	½ "	12,000	Indefinite	\$100 to \$600
Potato, Irish	600 "	14,520 hills	60 to 100 sacks	\$100 to \$200
Potato, Sweet	400 "	12,000 hills	100 to 200 sacks	\$100 to \$200
Pumpkin	1 "	500 hills	15 to 20 tons	\$75 to \$100
Rhubarb	2 "	5,000 plants	Indefinite	\$50 to \$200
Spinach	15 "	Broadcast	10 tons	\$250
Squash, Hubbard	1 "	680 hills	10 to 15 tons	\$75 to \$200
Tomato	½ "	2,000 plants	10 to 20 tons	\$100 to \$600
Turnips	8 "	Drill	500 sacks	\$100 to \$250



# A & M SEEDS

## AGGELER & MUSSER SEED CO'S

Vegetable Seeds are the Standard Seeds of the Southwest.

# A & M SEEDS

The vegetables grown from A & M seeds are the standard vegetables at every market in which they appear. The following pages offer only the standard varieties that have been tried and proven to be adapted to certain conditions, and each variety is adequately described, that the purchaser need make no mistake in selecting the seeds best suited to the season and to his local conditions. Read the descriptions carefully; if yet in doubt, write us SEEDS PLANTED OUT OF SEASON, OR IN UNCONGENIAL SOIL MEAN LOSS TO THE GROWER.

### VEGETABLE PLANTS AND ROOTS---MILLIONS OF THEM

No Tender Plants Sent by Mail Except at the Buyer's Risk

We aim to have on hand throughout the year vegetable plants of every kind in their proper season.

Hot house plants for early transplanting may be shipped by express in flats of 100 plants; each flat weighs about 50 pounds. All hot house plants are thoroughly hardened by exposure in the open before sending out. Cash must accompany all orders for plants.

	On Hand	Doz.	100	1000	Weight Per 1000
Artichoke, Green Globe.....	Jan. 1st to May 1st	\$1.25	\$8.00	\$ ...	
Asparagus, Argentineuil, Palmetto.....	Jan. 1st to May 1st	.40	2.00	8.00	50 lbs.
*Cabbage, Winningstadt, Danish Ballhead. All Year		.20	.75	3.00	50 "
*Cauliflower, Snowball, Early Pearl.....	Sept. 1st to Apr. 1st	.20	.75	3.50	50 "
*Celery, Dwarf Golden Self-Blanching.....	Apr. 1st to Sept. 1st	..	.75	3.00	50 "
Chives .....					
*Egg Plant, New York Spineless.....	Apr. 1st to Sept. 1st	.75	4.00	25.00	100 "
Horse Radish, Bohemian.....	Jan. to May 1st	.25	1.00	8.00	25 "
*Pepper, Anaheim Chili .....	Mar. 15th to Sept. 1st	.25	1.00	7.50	20 "
Chinese Giant .....	Mar. 15th to Sept. 1st	.25	1.00	7.50	20 "
Pimiento .....	Mar. 15th to June 1st	.25	1.00	7.50	20 "
Rhubarb, Wagner's Giant .....	Jan. to May 1st	1.00	7.00	...	...
*Sweet Potato, Yellow Jersey.....	Mar. 15th to July 1st	.15	.75	4.00	15 "
Porto Rico and Georgia Yam .....	Apr. 1st to June 1st	.15	1.00	...	...
*Tomato, A. & M. First Early.....	Feb. 15th to June 1st	.20	1.00	10.00	20 "
Home .....	Feb. 15th to June 1st	.25	1.25	10.00	20 "
Beefsteak .....	Feb. 15th to June 1st	.25	1.00	10.00	20 "
Stone .....	Apr. 1st to Sept. 1st	.20	1.00	10.00	20 "

After May 1st tomato plants grown outside, \$3.00 per 1000.

All orders for plants or roots must be accompanied with cash. We guarantee to send good plants, properly packed, and delivered promptly from the field to the carrier, but we cannot be responsible for negligence after they are out of our care, and on this account no plants will be sent C. O. D.

\*Owing to many losses because of delays in transit on account of inspection or other causes we will not send by mail any perishable plants such as Cabbage, Cauliflower, Celery, Egg Plant, Peppers, Sweet Potatoes or Tomatoes, except at the buyer's risk. These plants will be on sale at the counter throughout the season.

## A & M Artichoke

**Market:** Only the early artichoke brings a profitable price. Unless you can contract with a cannery or produce an early artichoke it is not advisable to plant more than for home consumption.

The seed may be sown at any time and transplanted when about eight inches high. It will mature in about eight months from time of planting the seed, but in Southern California the proper season to bloom is in March.

The best way to get a good artichoke is to secure plants from old stalks of some good strain, as seeds cannot be depended upon to produce any certain variety. One half dozen is enough for a family garden.

Transplant five feet apart in rows seven feet apart. When the young plants are attacked by aphid spray with "Black Leaf 40." About the time the buds are well advanced the under leaves often become a harbor for flies and aphids. When this occurs break off all the under leaves, clear the ground of all rubbish and spray with "Black Leaf 40." You will then have a long season of large, clean buds.

### Selected Large Green Globe

French stock is the standard variety. (Pkt.

## Jerusalem Artichoke

**Market:** On account of the perishable nature and low food value there is only a limited market and that is for seed purposes. They are excellent for the table cooked as potatoes or pickled.



### Jerusalem Artichoke Excellent for Hogs

It is a most valuable food for hogs. It is said by many hog raisers that a hog fed on artichokes has never been known to have cholera. They grow to perfection here, yielding as much as 500 sacks per acre. They are grown from tubers the same as Irish potatoes. It requires 300 lbs. to plant an acre. Cut the tubers to single eyes. Plant in March and April two feet apart in rows three feet apart. Let them grow until fall and allow the hogs to harvest the crop.

The tubers are excellent for table use boiled as potatoes or parboiled and pickled in vinegar.

(Per lb. 20c) postpaid; (10 lbs. \$1.00) (100 lbs. \$5.00) f. o. b. here.



Six Artichoke plants in a family garden

10c (oz. 60c) postpaid.

Plants from good stalks, 15c each, \$1.50 per dozen, postpaid.



# A & M Asparagus

No vegetable is more healthful or more palatable than the tender asparagus that appears on the table very early in spring.

Every home garden should have a bed about ten by twenty feet, planting about one hundred roots. This would furnish enough tips from day to day to supply the family table.

Set the rows two feet apart instead of four as for field culture.

## Culture for Field Planting

Drill the seed thinly in rows ten inches apart in your seed bed during March and April.

At the first appearance of rust, spray with the best grade of powdered sulphur. Transplant about January 1st, setting the roots twelve inches apart in furrows four feet apart and twelve inches deep.

Cover with two or three inches of soil, and on top of that three or four inches of well rotted manure thoroughly mixed with soil. This is sufficient for the first season, and will produce a marketable crop the following April, possibly March. Continue cutting until the sprouts become too small for the kitchen. Then allow them to grow to full size and spray the whole thoroughly with powdered sulphur during August, using only the best grade. This is to prevent or destroy any mildew, red spider or rust. In November cut the stalks close to the ground and burn them. Fertilize the rows with cheap coarse salt (one ton per acre). Cover the rows in hills like the picture. With proper hoeing and culture the asparagus rows will bear profitably for many years. One pound of seed will grow plants sufficient for one acre.

**Market:** Large acre age is grown for canneries, and in sections where it can be produced very early it is grown for Eastern markets. It is also very profitable to grow for local market.

**Palmetto** The popular variety for the home garden or market. The sprouts are green and their delicious flavor makes this variety the favorite for table use. (Pkt. 5c) (oz. 10c) (¼ lb. 30c) (lb. 85c postpaid.)

**Asparagus Roots** We have all ways on hand roots of the Palmetto and Argenteuil varieties. Two year old roots—(per doz. 40c) postpaid; (100 roots \$2.00) postpaid; (1000 roots \$8.00) f. o. b. Los Angeles.

Read carefully the pages of insecticides that you may order intelligently the right one for your purpose. Read page 11. It will guide you in making your selection.

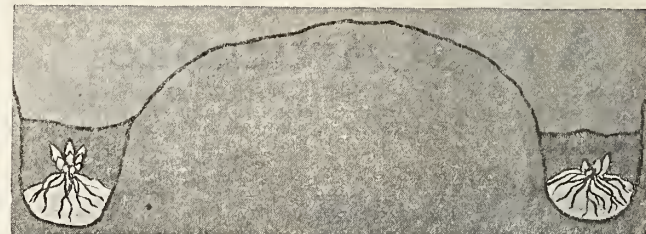


Asparagus Field at Time of Marketing; Notice the Ridges

**Argenteuil** An excellent variety for the canner and early shipper. This variety is now more extensively grown by large planters and shippers because it is more prolific, and stands shipping better. Also its purple tinge is attractive, and its excellent flavor puts it on an equal with the Palmetto for table use. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (lb. \$1.00 postpaid.)

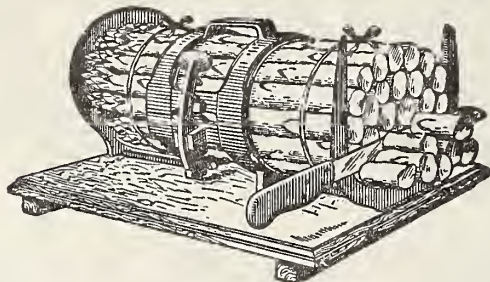
**Conover Colossal** Nearly the same as Palmetto, possibly larger, but culture has so much to do with size and quality that it is difficult to state which is the better variety. (Pkt. 5c) (oz. 10c) (¼ lb. 30c) (1 lb. 85c postpaid.)

To be a successful market gardener, it is essential that you have a full knowledge of insect life, that you may combat them intelligently and systematically. Consult the pages of this book devoted to Insecticides and Sprayers. See page 15 for literature on any agricultural subject.



Plant Asparagus Roots one foot apart in trenches four feet apart.

Argenteuil Asparagus



Philadelphia Asparagus Buncher

## Asparagus Buncher

Whether your patch is small or large, it will pay you to get an Asparagus Buncher, either one or two pound Buncher. All professional shippers put it up that way because it saves the retailer the trouble of weighing and the constant loss of over-weight to each pound; besides, this work may be done at home and not at the busy market.

We carry the Philadelphia make, which is the popular one with all large shippers. No. 1 size will shape bunches 3-3½ inches in diameter, weighing about one pound. No. 2 will shape bunches 4-5 inches in diameter, weighing about two pounds. Price—(No. 1, \$2.50) (No. 2, \$2.75) f. o. b. here. Mail wt. 10 lbs.

## No Excuse for Inefficiency on the Farm

### Bulletins and Circulars

Write to the College of Agriculture, Berkeley, Cal., for a bulletin or circular on any agricultural subject in which you are interested.

Write for circular 113 entitled "Correspondence Course in Agriculture." This circular teaches you how to proceed to take correspondence lessons in one or all of thirty-eight different subjects, at no expense to you other than the time spent at interesting reading. Read this free and beneficial literature emanating from Berkeley, and if you still hunger for further information, write the Department of Agriculture, Washington, D. C. for a circular on any agricultural subject on which you desire information. All is free for the asking. (See list of books on page 8). Read good healthy literature and be a good healthy and respected farmer and philanthropist.



# A & M Beans

All mail orders for beans should include additional ten cents per pound to cover postage. All orders for large quantities that would be cheaper to send by express or freight, we deliver to the transportation company at Los Angeles. We do not prepay transportation unless sufficient money has been sent for that purpose.

Market gardeners who are beginners and not familiar with gardening in the Southwest would do well to consult us either in person or by mail before buying, as to variety and time of planting. Special attention should be given to the instructions concerning the time of planting, which is an important factor in Southern California, as each month requires a different variety according to the market for which they are grown.

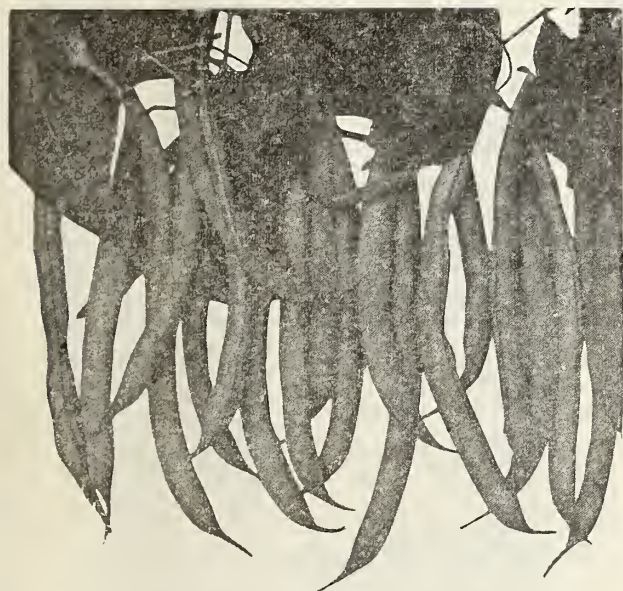
## Bean Culture for Home Garden

During the early spring give sandy soil preference, but heavy soil in summer. When the ground is properly moistened and pulverized, plant bush beans one or two seeds every four inches, in rows twenty to twenty-four inches apart. If the soil is heavy, cold and wet, one-half inch is deep enough. Plant more deeply in sandy soil. During the cool spring months plant shallow; during the hot summer months plant deep to moist earth, if it should require five inches. Do not plant in muddy soil, nor irrigate immediately after planting, else the seed will rot. During the winter months do all irrigating in the morning, because the water from the pipe is warm and will help the growth. When applied in the evening the water chills the plants, cools the soil, retards the growth and causes mildew. During hot summer days irrigate or sprinkle in the late afternoon.

Mulch the soil as soon as it gets dry enough after each irrigation. All beans should be sprayed with powdered sulphur of the best grade twice during their season—once before the blossom appears and again just before the green bean is ready to pick. Apply the powdered sulphur in the morning of a bright sunny day before the wind rises, and before the dew has dried. It is not necessary to cover the foliage with sulphur thick enough to injure it, but if sulphur is scattered along the row so that the dust will pass lightly over the field, the fumes created by the heat of the sun will prevent mildew. **Sulphur will not cure, but will arrest and prevent mildew.**

Owing to the enormous demand for commercial beans and the high price attained, it has been difficult to get ranchers to grow seed beans at any reasonable prices. Heretofore, the growers always received from one to three cents per pound more for seed beans than for commercial beans, but when the prices are advanced three-fold, and the seed of many varieties almost out of existence the price is limited only to what the customer is willing to pay. The dealer cannot control such a condition.

It has been necessary to eliminate many popular varieties because it is impossible to secure any seed. If your favorite variety is not listed you will know it is because of the great scarcity.



Refugee

## Beans for the Home Garden

A five cent packet of an early bush variety planted at the same time with a five-cent packet of a pole variety and ¼ lb. of Fordhook Bush Lima, will within seven weeks furnish a small family sufficient beans for a period of four weeks.

Therefore, we suggest that you plant on March 1st, Stringless Green Pod, Fordhook Bush Lima, Kentucky Wonder Wax or Kentucky Wonder and Refugee; and on the first of each month thereafter until August 1st, after which time give preference to planting Refugee, French Mohawk, Fordhook Limas, because these varieties are more hardy to endure the early winter weather.

Market gardeners should read carefully the description of each variety.

Anyone having light, sandy soil that needs enriching, should plant it to beans, inoculating the seed with nitrogen culture.

The hand-picking of seed beans is a task of large proportion and it may surprise you to know that we have employed almost throughout the entire, six or more persons constantly hand-picking the carloads of beans and peas.

### WE OFFER 1 PKT. EACH

Stringless Greenpod	}	or	{	Small White Snap
Ventura Wax				Kentucky Wonder
Monstrous Lima				Fordhook Lima
3 Pkts. 25c				3 Pkts. 25c

With an order for both collections we will include 1 Pkt. Yard Long Beans.

## Small White Snap

### SOMETHING ENTIRELY NEW

**THE ALL-PURPOSE BEAN**—A white-seeded stringless green-pod bush bean.

**Best for green beans** because it is tender and stringless, bears continuously for several months when picked closely, and because the beans are white. The pods are from 5 to 6 inches long, and is a good shipper as a green bean.

**Best for dry beans** because they are pure white, larger than the Navy, smaller than the Lady Washington; is very prolific (see picture) and does not pop in the field. The bush grows about 12 inches high. None better for canning green or for drying, and none excels it in flavor.

This "All-purpose" Bean may well be termed the "All-round Perfect Bean," for if it has any faults we have not discovered them.

Mr. J. M. Shaw says of it, "I have planted it in Los Angeles County for the last three years and it is all that you claim for it. It gives entire satisfaction and is praised by all who have seen it growing."

(Pkt. 10c) (¼ lb. 15c) (½ lb. 30c) (lb. 50c) prepaid; (5 lbs. \$2.00).



Small White Snap



## Bush Beans

### Round Green Pod Varieties

The following list comprises all the varieties best suited to general gardening. We have ceased to catalog others that would only mislead the gardener. Write for quantity prices on all beans.

**Early Refugee or 1000 to 1** An all around favorite for the summer months. Round pod, medium size, tender, desirable for table and cannery. It is a favorite with the market gardener because it is a good shipper, a good seller, and very prolific. Plant from April to August. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Stringless Refugee** This variety is a decided improvement over the old Refugee in that it is entirely stringless, somewhat larger pods and more prolific, which is claiming a great deal, for the Refugee bean has long been considered one of the most prolific of all string beans. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Stringless Green Pod** One of the best varieties for first early spring planting. It is very prolific and tender, a great favorite with market gardeners for a quick maturing crop. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Black Valentine** A very hardy and productive green podded bush bean, with strong, vigorous bush. In season a little later than our Earliest Improved Valentine, having the advantages of being suitable for both early and late planting. It will withstand early and late frosts that kill other varieties. It yields enormously and the pods are one-third longer than the Earliest Improved Valentine; they are perfectly round and straight. Owing to its many excellent qualities and large and handsome appearance it is a splendid sort for the market gardener. Very popular in the South on account of its blight resisting qualities; a long distance shipper. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Giant Stringless Green Pod** Makes an excellent succession to Burpee's Stringless Green-Pod when planted at the same time. The plants are of strong growth; pods slightly curved, quite meaty, being broadly rounded and saddle-backed; brittle and stringless at all stages. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

### Flat Green Pod Varieties

**Canadian Wonder** Flat pod, of good flavor, not stringless, but otherwise tender. Very hardy. Desired above all others by gardeners growing on the foothills for winter shipping, because of its luxuriant growth and continuous bearing of long, straight pods. Plant in September, October, November, December and January, according to your locality. (Per pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Six Weeks** A strong, rapid grower, which matures quickly. Flat pod. Only desirable for forcing. Plant in February and March, also early in September and October. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**French Mohawk** Long oval pod, very tender and prolific. Matures in six weeks. Desirable for a profitable short crop, as only two months is required from seed time to the end of the crop. Plant every month from March to October. (Per Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Dwarf Horticultural** Desirable both for green and dried beans. Stringless and of excellent flavor. It is of Italian origin and is very popular with the Italian population. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

The enormous demand for commercial beans at unprecedented prices has caused an unprecedented shortage of acreage planted to string or snap beans. In addition to the above cause, the growing season of 1917 was very unfavorable so that the seedsmen received only a small percentage of their growing contracts.



Stringless  
Greenpod



Canadian Wonder

### Round Yellow Pod Varieties

#### Stringless or Refugee Wax

This is a favorite because of its hardy growth and enormous yield of tender, round stringless pods of excellent flavor. Plant from April until September. (Per Pkt. 10c) (½ lb. 25c) (lb. 50c prepaid) (10 lbs. \$3.50 f. o. b. here).

**Prolific Black Wax** Pod round straight, five to six inches long. Decidedly the most desirable for mid-summer gardening. Plant from April to August. (Per Pkt. 10c) (½ lb. 25c) (lb. 50c prepaid) (10 lbs. \$3.50 f. o. b. here).

Our seeds are the best that grow because they are planted and grown especially for us, and we get the best of the crop.



Golden Wax



Early Refugee Wax

#### GROWING GREEN OR WAX BEANS FOR THE CANNERY

See your cannery about it.

It is a good side-crop to grow in a young orchard to make quick returns because your crop is off and the ground available within ten weeks.

If your crop is too small for the cannery, and too large to sell by the wayside (see page 64), buy a field canning outfit and put up all your surplus fruits and vegetables.



## Flat Yellow Pod Varieties

**Davis Kidney Wax** Good bearer; pods are long, rustless and hardy; very tender when young. (Pkt. 10c) (½ lb. 25c) (lb. 50c) prepaid; (10 lbs. \$3.50) f. o. b. here.

"Phoenix, Arizona, June 28, 1917.

Aggeler & Musser Seed Co.

Dear Sirs:—The Davis Kidney Wax Beans that I got from you in the spring are promising so well that I wish to try them as a fall crop. They are in bloom and the pods are setting nicely on the vines and the thermometer ranging from 100 to 110 degrees in the shade. Other varieties that are planted alongside are blighted and the blooms are falling off with the heat.

(Signed) Luther Look."

**Our Golden Wax** Long, flat pod, rich golden yellow, stringless. This variety is so superior to other strains of Golden Wax that we have discarded all but this. Plant early in April to August. (Pkt. 10c) (½ lb. 25c) (lb. 50c) prepaid; (10 lbs. \$3.50) f. o. b. here.

**Ventura Wonder Wax** Nearly all agree that this is a wonder indeed. Long flat pod, very prolific; bears early, and continues nearly all summer; planted in September, if not too cold, bears until January, being rust proof. This bean was introduced by us in 1900, and has been the market gardener's favorite since that time. Plant from February to October. (Pkt. 10c) (½ lb. 25c) (lb. 50c prepaid) (10 lbs. \$3.50 f. o. b. here). Write for quantity price, as prices fluctuate.



A photograph of one plant  
Ventura Wonder Wax

### A WORD ABOUT STRING BEANS

No other green vegetable contributes so largely to the family table as the string bean. A small plot in the back yard ten feet square planted every two weeks from February 1st to September 1st will supply a large family abundantly with beans all summer. There is no waste of beans. When too old to eat green, shell them. When too old for shell beans, allow them to mature for use during the winter, when green beans cannot be had.

If there is a surplus of green beans dry them.

In early February, plant Canadian Wonders. Two weeks later plant the Six Weeks. In early March, the French Mohawk, later the Stringless Green Pod or any other variety you may prefer, until Sept. 1st, and then plant again the Six Weeks and Canadian Wonders.

Remember these varieties and their time of planting. It will mean success or failure to your garden.

### DRYING VEGETABLES

Because of the great necessity for the conservation of food, the Department of Agriculture published a Bulletin (No. 841) on the subject of drying fruits and vegetables with the proper recipes for cooking them. As a result of this Bulletin there is some consideration given to the idea of forming companies to go into the drying of vegetables just as is now being done with fruit, and it is much cheaper than canning and will accomplish much toward lowering the high cost of living, and toward feeding the starving millions in Europe.

Write at once to the Department of Agriculture and ask for Bulletin No. 841.

## Pole Beans

### A WORD ABOUT POLE BEANS

Many growers hesitate to plant pole beans because of the scarcity of poles. This objection is easily overcome, and the greater profit in growing the pole varieties should be sufficient reason for going to a little extra care. Let the family gardener plant Oregon Evergreen corn early in March, and when the corn is two feet high, plant to every other hill some Kentucky Wonder, or Kentucky Wonder Wax. Thus you will have a crop of early sweet corn and an enormous crop of beans. To the market gardener, we recommend the corn, and also the four-foot plaster lath.



A good way to pole Kentucky Wonder and Pole Lima beans. Recommended by Mr. Geo. Smith, in charge of the Examiner home garden.

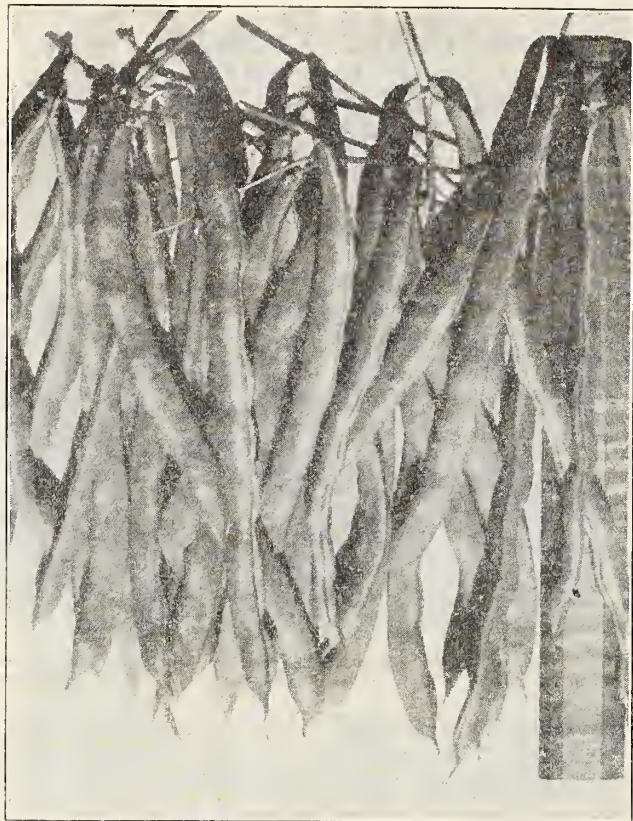
**Kentucky Wonder** Long, round pod. This is the most popular bean in Southern California, because here it grows to perfection; is more prolific than any other variety, which, together with its other good qualities, makes it the gardener's delight. Plant from April to July. Do not plant later than August, as it is very prone to rust during the month of September. (Pkt. 10c) (½ lb. 25c) (lb. 50c prepaid) (10 lbs. \$3.50 f. o. b. here).



### Kentucky Wonder Wax Poled Wigwag Fashion

**Kentucky Wonder Wax** The Pride of the Garden. This bean first appeared in the garden of Miss Callahan, on West Twelfth Street, this city. Our attention was called to it in 1898. Investigation proved it to be an entirely new variety. After two years we offered it in small quantities to our customers. Its popularity as a home garden bean soon reached nationwide proportions, and today is offered by nearly every seedsman in the United States. It commences to bear when scarcely higher than the average bush variety, and keeps on producing until killed by frost. It is a rampant grower, one plant filling a pole with a mass of vines densely loaded with luscious beans. They are firm, entirely stringless, and when cooked deliciously rich and buttery. The seed is brown, closely resembling that of the Kentucky Wonder. Plant from April to August. (Pkt. 10c) (½ lb. 25c) (lb. 50c prepaid) (10 lbs. \$3.50 f. o. b. here).





White Seeded Kentucky Wonder

**White Seeded Kentucky Wonder** This variety of the many pole beans may truly be termed the Market Gardener's Money-Maker. It is as hardy and rust-resistant as the Canadian Wonder or Black Valentine, yet tender as the Old Homestead. In the South where earliness and lateness mean so much to the market gardener, the White Seeded Kentucky Wonder is far ahead of other varieties. It is enormously prolific of firm pods that withstand shipping to almost any part of the United States. It matures ten days earlier than the Brown Seeded Kentucky Wonder. The seed is pure white, and on that account is a profitable commercial bean. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Horticultural Pole** Also referred to as Romaine, Cranberry, Italian and Cornfield. Its large succulent tender pods make it a desirable bean for the table. It is also one of the most desirable green shelled beans for succotash and excellent as a dry bean. (Pkt. 10c) (½ lb. 20c) (lb. 40c prepaid).

**White Crease Back** This variety is especially valuable for its extreme earliness, and its habit of perfecting all its pods at the same time. Vines small but vigorous, and, in good soil, wonderfully productive, bearing pods in clusters from four to twelve. Pods medium length, silvery green, of the best quality as snaps and stand shipping better than most sorts. The seed is small, oval, very white and hard. It is an excellent bean to cook dry or to sell on the open market as the small white bean. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Lazy Wife** One of the best pole beans for snaps. The large, fleshy pods are five to six inches long and entirely stringless when young, have a rich buttery flavor. When nearly matured they are delicious when shelled and cooked while yet green. The dry beans, too, are unsurpassed by any. The seed is white, nearly round, and some larger than a pea. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

**Baldwin Wonder Wax** A very prolific wax-podded variety which we recommend for the home garden and especially for home canning because of the beautiful waxy pods. The round fleshy pods are entirely stringless, very brittle and of exceptionally good quality. Do not fail to include this variety in your home or school garden order. (Pkt. 10c) (½ lb. 25c) (lb. 40c) postpaid; (10 lbs. \$2.75).

## Celestial or Yard Long

A good table bean as well as a curiosity. It is very prolific and a rank grower. Should have ample arbor to climb upon. It should be grown more extensively in the home garden. It is of Chinese origin and one of the best vegetables emanating from that source. (Pkt. 10c) (1 oz. 25c postpaid).



Yard Long Bean

## The Scarlet Runner

An old-time favorite that heretofore has been planted chiefly for ornamental purposes. But few people know that the Scarlet Runner may be planted May 1st and in six weeks attain a height of eight feet, and rapidly cover an arbor with vines twenty feet long.

The Scarlet Runner is constantly bearing beautiful scarlet blossoms.

The Scarlet Runner pod is one of the best green beans in the world when sliced and cooked as any other green bean. They are also a splendid shell bean.

The Scarlet Runner planted May 1st will bear edible pods from July 1st until late fall. When the vines mildew trim them back to within a foot of the ground. The roots will survive the winter, and by the following May will have the arbor again covered and bear green beans until August when the vines again mildew. Cut back as before and with proper irrigation they will bear another crop in October, and so on two crops a year indefinitely.

Be sure to build a permanent arbor, and plant some Scarlet Runner during April.

(Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid.



The Scarlet Runner as an Arbor Bean

Get Ready Now for Big Business. See Page 4.

Preliminary estimates of farm crops announced by the Department of Agriculture in its November crop report follow (in thousands of bushels):

Corn, 3,191,083,000, or 178,700,648,000 pounds.  
Potatoes, 439,686,000, or 26,380,160,000 pounds.  
Sweet Potatoes, 84,727,000, or 4,235,350,000 pounds.  
Kafirs, 73,380,000, or 4,402,800,000 pounds.  
Beans, 15,957,000, or 957,420,000 pounds.



## Bush Lima Beans

### SPECIAL FOR MARKET GARDENERS

The Dwarf class cannot be recommended too highly. The beans can be grown and gathered much more easily than the pole limas as the vines require no support. They can also be grown closer together than those of any pole variety. Dwarf limas are fully equal in quality to pole limas and as a rule are earlier maturing.

Limas require a longer season for maturing than other garden beans. Do not plant till the ground is dry, weather warm and danger of frost is over. If possible select rich, light soil. Plant in drills two to three feet apart, dropping the beans three to four inches apart and covering one and one-half to two inches deep. Hoe often, but only when the leaves are dry.

### Fordhook Bush Lima

In order to get the best results, plant one foot apart in rows 3½ feet apart. Although this bean has been offered for several years, it is comparatively a new variety. It is an improvement over the well known bush Lima because it is more prolific. It is a strong grower, more resistant to blight, and is more profitable to grow for the market because the pods remain green. This is of great advantage to the peddler, retailer and shipper. It has received universal praise. We recommend it to our customers for both home and market gardens,—for the home garden because of its excellent flavor and productivity; for the market gardener because it is demanded by the shipper. (Pkt. 10c) (½ lb. 25c) (lb. 45c prepaid) (10 lbs. \$3.25 f. o. b. here).

### Improved Bush Lima

This bean differs from the old bush variety in being ten days earlier. Will yield one-fourth more tonnage per acre. The pods contain four to five beans that are larger and thicker than the old bush lima. Where the Improved Bush Lima is known the old variety is no longer in demand. (Pkt. 10c) (½ lb. 25c) (lb. 45c prepaid) (10 lbs. \$3.25 f. o. b. here).

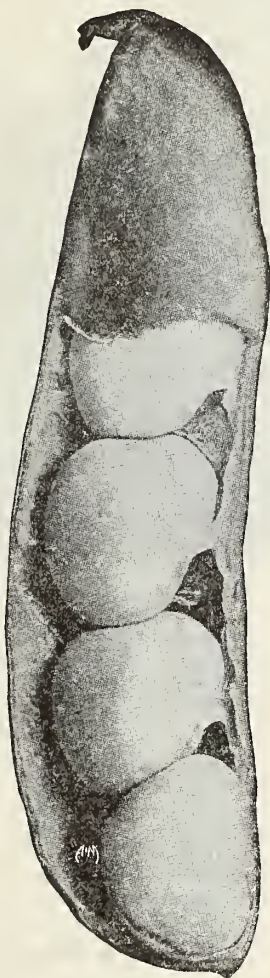
**Henderson's Bush**—Small white Lima Bean, of excellent flavor and enormously prolific. It is grown so extensively here that it ranks commercially with common limas and other commercial varieties. It is used largely for canning. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid). Ask for quantity price. See page 19.

**Burpee's Bush Lima**—This bean has become very popular with the market gardener in all irrigation districts because it is earlier and more easily grown. There are no vines in the way when irrigating and cultivating. It is enormously prolific and keeps bearing a long time. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

#### READ THIS

We are continually getting letters of inquiry for just such information as is given in this book. We are pleased to get the letters, but if the writers would first look to the subject of their inquiry, they would in many instances save themselves trouble and time.

This Catalog comprises a list of all vegetables and farm seeds offered by us, all of which have been tried and proven to be adapted to climatic conditions of the Southwest and Mexico. BUT always have in mind, each season, even each month requires not only different varieties of seed but different strains of the various varieties. For instance, New York Special Lettuce is the best of all when planted from August 1st to February 1st, but planted at other times is very inferior, while Marblehead and Iceberg Lettuce are best suited to the Summer months. This applies only to the climate of the Southwest. What is true of lettuce will apply also to potatoes, beans, melons, onions and many other vegetables



Fordhook Bush

## Limas, Pole Varieties

Write for quantity price

**Pole Lima** Pole varieties of Limas are far more profitable to grow than the bush varieties; what they lack in earliness they make up in continuous bearing. They should be planted from April 1st until September 1st.

### The Skillman Lima

This bean has been the market gardener's favorite for many years. It is a cross between the Burpee's Bush and the common lima. It will produce five sacks more per acre than the common lima. Each year we carefully hand-pick our seed stock, selecting only the true type of seed. There are no rattlers in the Skillman. (Per pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

### Large White Lima

One of the best shell beans, either green or dried. Very prolific; pods large. (Per pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

### King of the Garden

Very prolific; large and desirable both for the home garden and for the market gardener. (Per pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

### Carpenteria

This is just the lima for the market gardener to grow for main crop. It is early and large, and enormously prolific, without much vine. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

### Early Leviathan

We recommend this variety to be planted where it may have a trellis to climb upon. It is the ideal lima for the home garden. It is very productive. The pods grow in clusters. (Pkt. 10c) (½ lb. 25c) (lb. 40c prepaid) (10 lbs. \$2.75 f. o. b. here).

## Bush Lima Beans



Los Angeles Wonder Lima

### Los Angeles Wonder

This new lima proved to be all that we claimed for it last year, when we first offered it.

Mrs. F. M. Walters, of Anaheim, says: "It is far ahead of the Burpee's Bush for green beans, and will yield twice as many sacks of dry beans as the common lima. The beans are very large, and in flavor equal to the Monstrous Lima."

We can give it no better endorsement than Mrs. Walters, who has long been a successful market gardener, and knows. (Pkt. 10c) (½ lb. 15c) (½ lb. 25c) (lb. 50c) postpaid; (5 lbs. \$2.00 f. o. b. here).

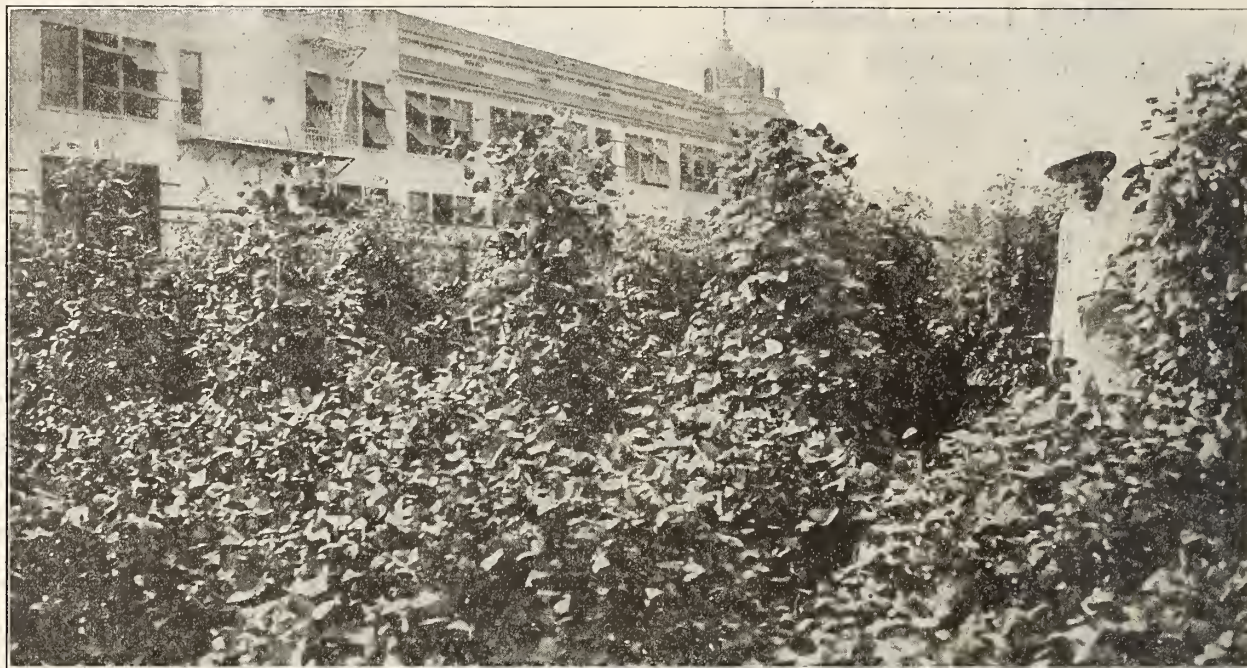
**Broad Windsor**—(See page 19). (Pkt. 10c) (lb. 25c) postpaid. Write for quantity price.

All statements, figures and descriptions given in this catalog are authentic and can be verified. The pictures with few exceptions have been taken from life. The quotations that appear throughout the book are from letters written us by pleased customers. They are included here, that the information imparted may be of value to you.

Therefore where you see the sign "Read," read it.

When in doubt, read this catalog, and if still undecided then, write us about it.





Monstrous Lima Actual Size

## The Monstrous Bush

### A Great Money-Maker

Two crops a year for many years. Originated in Orange County, Cal. Introduced by us in 1907. This picture shows actual growth of the bean.

In addition to this we have numerous testimonials to the effect that we have not exaggerated when we claim this to be the largest, most prolific, most profitable and best flavored Lima bean now in existence. Like every other vegetable, it must have proper culture. Plant 6 feet by 6 feet, leaving one stalk in each hill. If convenient, plant in a sheltered place about April 1st. You will then be gathering beans during September and possibly until January, and when frost has destroyed the tender growth, prune as you would a grape vine. Soon new growth will appear and by May 1st you have a new crop as profitable as peppers or string beans or any other early vegetable. During July the vines will show age and become mildewed; prune as before and in October you will begin gathering your third crop. Continue pruning twice a year; irrigate and fertilize. (Pkt. 15c) (¼ lb. 25c) (½ lb. 35c) (lb. 60c) (10 lbs. \$4.50 f. o. b. here).

There is nothing more profitable in a city garden than a dozen stalks of this wonderful bean. It is a common occurrence for our city customers to tell us of its great productiveness and excellent flavor.

One home gardener writes us that from one pound of seed planted in 1912 he gathered forty-two pounds of dry beans, besides all the green beans the family could use, and in 1913 he planted five pounds dry beans, and the vines were then beginning to bear a second crop.

Mr. Conrad Schlender, Estero, Fla., writes: "I have tried your Monstrous Bush Limas for over two years. They do well as long as the dry season lasts. The last time I planted in late December, got a big crop in May, before the rainy season started. The heavy rains and hot sun finished them."

An application of the best grade of powdered sulphur would have prolonged the life of the vines, but they should have been pruned to allow a second growth.

Year after year we have new testimonials portraying the wonders of this wonderful bean. One grower near Redondo now claims to have picked more than seven hundred pods from one vine. Another Redondo grower realized \$260.00 off of ¾ of an acre from second crop during June and July, pruned the vines and began picking the third crop early in October.

### READ

"I want to say a word for the Monstrous Bush Lima Beans. They were the best lima beans I ever tasted. Had lovely beans for Thanksgiving, Christmas and New Year's. Had friends from the East and they thought the bushes the finest as well as the beans. Picked the last mess Jan. 10th, 1916, but not the last on the vines, as they were loaded, but one night the frost was a little too heavy, so we trimmed them to get ready for the early crop. Thanking you for advising the special kind. Mrs. Frank J. Lightfoot."

As prize-winners any school garden that will plant the Monstrous Lima and the Home Tomato, and will trellis them eight feet high, will be sure to win the prize over any garden that does not have them. They are giants.

This picture shows the enormous growth of the plants of the Monstrous Lima Beans. The stakes are seven feet tall. The vines are tied to the stakes because this is not a climbing vine but a bush.

### ATTENTION MARKET GARDENERS

If you are located in a nearly frostless section and have water available for irrigation, we do not think there is any more profitable crop for you to plant than the Monstrous Lima. Two crops a year indefinitely, about \$600.00 per acre each year. You will have green beans when all other varieties are out. Do not hesitate to accept this advice for its truth has been demonstrated.

## Just a Word About the Phases of the Moon:

Much has been printed and many questions asked about "Planting By the Moon." We have received the following from H. A. Dike, Louisiana, and give it here in full.

"Aggeler & Musser Seed Company,"

"Greeting:—

"I have just received the goods selected from your 1916 catalog; also your new catalog and will send with this one more small order, then my garden will be about full.

"As I have had good success as field manager in Imperial Valley and Tampico; also here for three years, will suggest a successful out-line I have used for 12 years which you may publish if you wish.

"To have the best results in planting, two things are necessary: Irrigation, and plant about three days before the moon phase. This outline is taught in Agricultural Schools in Germany and Japan. Plant at new moon all kinds of greens, all kinds of hay, cuttings of trees and grapes.

"Plant at full moon. In the United States,—the best time to plant is the week before Easter,—beans, corn, cabbage, cucumbers, egg plant, melons, onions, okra, peas, peanuts, squash, tomato and cotton.

"Plant at last quarter, beets, carrots, parsnips, potatoes, sweet potato slips and turnips.

"Results of wrong planting: Beans, peanuts, Irish potatoes and sweet potatoes started at new moon makes vines and no fruit. Peanuts planted at last quarter produce empty shells. Roots of all kinds dug at last quarter will keep best.

"The writer has followed this for 12 years."



# Commercial Beans

Write for Quantity Price

Reading from left to right:—Broad Windsor, Lewis Lima, Henderson Lima, Red Kidney, Pinto, Pink, Garvanza, Mexican Red, Blackeye, Lady Washington, Navy, Tepary, Soy, Lentil



Be sure to consult us when in the market for these varieties.

If only one pound is desired, send 30c to cover packing and postage. For larger quantities, ask for the prevailing prices.

Ask for price at the time of purchase. Because of the close margin at which this seed is sold, no price can be set in advance of the daily market. We have the best cleaning facilities on the Coast. All our seed is re-cleaned and even hand-picked when machinery fails.

**Marketing** If you have not contracted with some buyer in advance for your crop, when ready to sell send or bring a sample to us and we will endeavor to put you in touch with a buyer and post you concerning the market.

All commercial beans should be planted in large acreage. It is easier at any time to dispose of a carload than less, and more profitable to the out-of-the-way grower who must always pay the freight to some central warehouse. It is advisable for the small rancher when contemplating the planting of beans, to agree with his neighbors to jointly plant not less than eighty acres, as it requires 80,000 pounds to make up a carload for Eastern shipment.

It often requires fifty cents per hundred pounds to ship small quantities to a warehouse, whereas a carload would be shipped direct from your nearest siding at no cost to you, thereby saving to you and your neighbors four hundred dollars on each carload.

## SOUTHERN CALIFORNIA, THE LARGEST BEAN-GROWING SECTION IN THE WORLD.

Where values are counted by millions of dollars, you should not be negligent in the selection of seed stock, nor in the method of cultivation. It is the purpose of these pages to give information and assistance that will benefit the inexperienced grower.

Department of Agriculture, Washington, D. C., reported under date of October 15th, 1917: Almost double the quantity of beans is forecast, with a total of 15,814,000 bushels in the five principal growing States—New York, Michigan, Colorado, New Mexico and California. California leads with 9,278,000 bushels; Michigan is second with 4,006,000 bushels.

**Massachusetts Snow Drop** It is very popular in Massachusetts, where it was introduced. We have only 1000 lbs. which is all we know of on this coast. Be sure to get enough of them to have a start.

**Broad Windsor** (Vicia Faba) Sometimes called a tree bean because of its upright growth, bearing its pods at the axil of every leaf. It is sometimes called Horse Bean. Cooked as a shell bean it is very good for table use, and is grown largely and sold at the public market for that purpose. Owing to the succulence of its stalks and its productiveness, there is nothing better to grow for healthy hog pasture, and owing to its propensity for gathering nitrogen, it is one of the best soil renovators.

The proper time to plant is in September. It will withstand frost and a temperature cold enough to form thin ice.

Drill in rows as lima beans, using about fifty pounds per acre. It yields about two tons and sells for about four dollars per hundred pounds.

**The Lewis Lima** The common lima is grown so largely in California that it easily exceeds in acreage all the other varieties combined. There are many strains of the common limas, but the Lewis is conceded to be the best. Our seed is all carefully rogued in the field and hand-picked under our supervision at our warehouse. You will find no splits nor rattlers in our seed. It is a short-sighted policy to buy cheap seed from grocers.

Last season one buyer came to us with samples ranging in price from five to seven cents per pound. Our price was nine cents; but when he saw the beans in comparison he did not hesitate a moment to buy our beans.

**Henderson Bush Lima** This is a small white lima that is grown largely for canneries. It is advisable to secure a contract before planting. It is harder than other limas, and will thrive under conditions that will cause others to fail.

**Tepary** A small white bean similar to the Navy.

The Agricultural Experimental Department has recognized the great merit of the Tepary as a drought resistant bean, and recommended it to be grown on the mesa lands where it is too hot and dry for our common varieties to grow. It is also recommended for a summer cover crop and soil renovator, as it needs no irrigation. It yields 20 to 30 sacks of dry beans per acre. The vines should be handled when damp to avoid loss by shelling.

Plant the Tepary with the ordinary drill that you would use for the Navy, but drop them farther apart, because it grows a low spreading vine ordinarily about two feet in diameter, but when irrigated it spreads as much as four feet in diameter; therefore when planting, estimate the quantity of seed and distance according to the richness of the soil and moisture. We advise sowing fifteen pounds per acre.

The Tepary is immune to common bean diseases. Mr. E. B. Mitchell, living in the Lower Rio Grande, Texas, advises planting Teparys early in August. He lost his April planting because the blooms would not withstand the hot weather in June, but the August planting yielded about 1700 lbs. per acre.

Mr. B. T. Barney, Templeton, California, reports 410 lbs. of Teparys from two pounds of seed.

**Pink, Mexican Red, Red Kidney** All three of these varieties are good table beans. The PINK is grown more largely because it is more profitable to the grower and finds ready sale. The MEXICAN RED is the popular bean in Mexico, and should be grown more largely here. As a table bean it is excellent, both as a dry bean and as a green shell bean, and will become more popular as it becomes better known. The RED KIDNEY is an old-time favorite and commands a higher price than other varieties. It is more hardy and more rust-resistant. The pods are long and straight, bearing six to eight beans. It is particularly easy to thresh, yet does not pop in the field.

**The Blackeye** This bean is always profitable to the grower because it yields 1500 to 2500 pounds per acre without irrigation, and on almost any kind of soil. It is a good cover crop and soil renovator. The beans find ready market at a fair price, but usually below that of other varieties. Rabbits will not eat the Blackeye.

**Lady Washington and Navy** These two varieties go hand in hand. Both are small white beans, but the Navy is slightly smaller and is often distinguished by being called the Small White, while the Lady Washington is called the Large White, yet the largest is a scant half-inch long, while the Navy is scarcely more than one-fourth inch long.

The Navy is rust resistant. **Blue Pod Navy** While this bean is no kin to the Navy bean, we have so named it that the reader may have some description of it. It is harder and more prolific than the Navy, which the dry bean so much resembles. The vine grows to a length of six feet and the pods are decidedly blue. They are also tender and good to eat as snap beans.

Mr. Wagner says it should have been called 100 to 1 because he got 100 pounds of dry beans from 1 pound of seed.

**Garvanza and Lentil** These are not beans, yet they go hand in hand on the market reports with beans, and we have listed them with our commercial beans.

Garvanzas. Planted in April, should be ready to harvest in August. It will endure light frost with little injury. They grow a low branching bush, bearing the pods in the foliage about one foot above the ground. They are prolific, yielding twenty to thirty bean sacks per acre, and always commanding a higher price than beans. Cultivate the same as beans.

Lentils. Should be planted from January to May. They are nearly as hardy as the Winter Vetch, which the vine very much resembles. The Lentil commands a price nearly double that of beans, and will net the grower about the same value. Cultivate the same as peas.



## COMMERCIAL BEANS--(Continued)

**New Mexico Pinto Bean** The bean that made New Mexico famous and added much to the wealth of that state. 1917 crop in New Mexico alone estimated at 50,000,000 pounds.

One thousand carloads valued at four million dollars (\$4,000,000) \$90.00 per acre average.

This bean was offered by us last season in an experimental way with the result that it has proven as hardy and heat resistant as the Tepary. The rabbits will not eat it if there is any other variety of bean, or other green food to be had.

The Pinto thrives particularly well in higher altitudes where about fourteen inches of rain is the season's average.

The Pinto grows a bush like the Pink Bean. For an inland crop it is preferable to the Tepary because of a larger yield per acre and finds a ready market.

E. L. Journigan grew 24 sacks per acre in 65 days.



**Pinto Barons of New Mexico**

The Pinto has never been known to have weevil.

### HOW TO COOK THE NEW MEXICO PINTO BEAN

Soak over night in soft water if obtainable, and cook the same as any other, using water only, at the start. A closely covered vessel is best. Be sure to cook until thoroughly done. If you wish to add more water, be sure to add only HOT water. When almost done, or after they have turned soft, add a piece of fresh or salt pork for seasoning. Fresh pork is best. Be sure NOT to SALT, until after they are done and ready to serve, as salt put in while they are cooking will toughen the skin, and delay the cooking. They should cook done in two and a half to three hours. When done serve with tomato sauce, chili con carne, or just straight. When you have eaten the first plateful, if you don't ask for a second, there will be something wrong with your appetite.

### ANTELOPE VALLEY GROWS BEANS

Mr. J. L. Davidson reports from Antelope Valley that he experimented with the following varieties with results as follows:

Blackeyes, Teparys, French White all done very well. Pinks, Navys and Red Mexican fairly well. Pintos planted late did best of all.

**The Soja or Soy Bean** The wonder is that this valuable bean, which has for many years been a staple crop of permanent value in the Orient, is only now coming into general notice, notwithstanding, it has been introduced into the United States more than one hundred years ago.

But the Soja Bean received its greatest notoriety when in July 1917 the Daily News announced the arrival at San Pedro of a cargo of 5,000 tons of Soja Beans consigned to a local milling company to be ground and the oil extracted and used in the manufacture of soaps and paints, and the cake pulverized and used for poultry food.

The vines are on a par with Alfalfa in food value. During one month Soja Bean oil to the value of \$2,800,000 entered the United States through the port at Seattle.

About the Soja Bean: It contains 17% oil, 41% protein; grows luxuriantly on rich soil; abundantly on poor soil; matures all pods at once in about 100 days; yields above 2,000 lbs. per acre; will survive a frost that would kill cow peas. The market is unlimited and over-production impossible. The annual consumption in the United States alone exceeds in value \$10,000,000. The Southeastern states are supplying about all that is not imported from the Orient. The Japanese are growing it in California. Why let this good thing pass un-noticed?



**Soy Bean**

exceeded 200,000 acres. California Wake Up!

This plant was grown by Mr. Geo. Smith in the demonstration garden under the auspices of the Home Garden Committee. Mr. Smith says it never blooms but pods appear when it is about eight inches high and throws one or more pods every inch on every branch. With proper cultivation it must be a wonderful producer.

The acreage devoted to soy beans for 1917 in the states of leading production are as follows: North Carolina, 60,000 acres; Tennessee, 50,000 acres; Illinois, 30,000 acres; Ohio, 12,000 acres; South Carolina, 11,000 acres; New York, 10,000 acres; Arkansas, 10,000 acres.

Soy beans are grown to a limited extent in all of the eastern half of the United States. The total plantings for 1917 considerably

## Bean Culture

By V. C. Bryant, College of Agriculture, Berkeley

**Soil**—Beans are produced on a variety of soils in this State, but do best on the more loamy type of soils. A satisfactory yield is often secured on the heavy adobes, but the difficulty with which these soils are tilled makes them rather undesirable for bean growing. In the irrigated localities of the State beans can be grown successfully upon some of the very sandy soils, but difficulty is often experienced upon this type of soil by the blowing of the sand, thus injuring the young plants just as they are starting.

**Preparation of the Land**—Thorough preparation of the soil and a good seedbed are absolutely necessary for a good yield. The two principal points to be kept in mind in preparing the seedbed are to encourage deep rooting of the plants and to conserve all the moisture possible. In order to do this, the land should be plowed at least eight inches deep during the winter or early spring, thus enabling the

later rains to penetrate deeply into the soil so that the moisture can be conserved for the use of the crop. This early plowing will also allow the soil to settle and become firm, which is necessary to insure germination of the seed. If, however, plowing is impossible until just before planting time some artificial means of settling or firming the soil must be used. For this purpose the subsurface packer, a heavy corrugated roller or a disk-harrow well weighted down, are very satisfactory. After settling the soil, the field should be gone over at least two or three times with a heavy harrow before seeding. If the field has been rained upon since plowing a disk or spring-tooth chisel or a harrow should also be used. An ideal seedbed is one that is firm, but not compact, with a dust mulch over the surface from two to three inches deep. The mulch is necessary to hold the moisture and must be retained throughout the growing season if the maximum yield is to be produced.





Blackeyes in Young Orchard. N. M. Entler Ranch, near Ontario.

**Amount of Seed to Plant Per Acre**—This will depend a great deal upon the soil and climatic conditions. So that it is very hard to arrive at a definite figure. However, the following table will serve as a general guide for some of the common varieties. The first column shows amount of seed to plant per acre where there is a minimum amount of moisture to produce crop; second columns shows amount of seed to plant per acre where moisture is abundant; last column shows amount of seed to plant per acre under average conditions with a fair amount of moisture.

Tepary .....	7 lbs.	18 lbs.	10 to 12 lbs.
Small Whites .....	8 "	20 "	12 to 15 "
Blackeyes .....	12 "	25 "	18 to 20 "
Pinks .....	15 "	30 "	20 to 22 "
Mexican Red .....	15 "	30 "	20 to 22 "
Large Whites .....	15 "	30 "	20 to 22 "
Lady Washingtons .....	15 "	30 "	20 to 22 "
Limas .....	..	..	50 to 60 "

**Methods of Planting**—Beans are grown most successfully by planting them in rows thirty to thirty-six inches apart and by placing the plants six to eight inches apart in the rows. There are regular bean planters on the market, but in case one of these is not available an ordinary grain planter with a specially made plate is very satisfactory. The depth of planting will depend upon the soil. Generally speaking, the seed should be placed one to one and one-half inches in the moist earth. Considering the dry mulch which should be upon the surface at planting time, this would make the total depth of planting about three or four inches.

**Time of Planting**—This will depend much upon the location. In the interior valleys the principal point to be kept in mind is to plant the crop at such a time that it will not blossom during the extremely hot summer months. If the blossoms appear at this time the hot wind will "blight" them so that the beans will not "set." If the beans are planted as late as the last of May or the first of June they will usually bloom late enough to avoid this trouble. The exception to this time of planting is where the Tepary bean is grown in some of the drier localities. In this case it is necessary to plant earlier in order to make use of the moisture which has fallen during the rainy season. Along the coast and in the delta areas some time during the month of May is usually the best time to plant.

In the interior valleys where irrigation water is available beans can be successfully grown as a second crop. In this case the land should be irrigated and the seedbed thoroughly prepared as outlined above. This work should be rushed to completion so that the beans can be planted by or shortly after July 15th.

**Cultivation**—The principal object of cultivation in this State is to conserve the moisture. The grower should keep in mind that in order to conserve the moisture for the growing crop a surface mulch two or three inches deep must be retained throughout the growing season, and this can only be done by an occasional cultivation. It is best to cultivate no deeper than is desirable to have the surface mulch. Deeper cultivation will only produce excessive drying by exposing to the air the moist soil from below and will also disturb the surface roots. A thorough shallow cultivation should be given every two or three weeks until the beans begin to "set." The crop should be cultivated after each irrigation in order to re-establish the surface mulch.

**Irrigation**—Beans should receive very little irrigation. Plenty of moisture should be stored within the soil before planting and a surface mulch maintained in order to hold this moisture. If this is done properly the beans will require very little or no irrigation in most localities in this State. Where they are grown as a second crop, or where the soil dries out before a seedbed is formed, a thorough irrigation should be given and the mulch re-established before planting. Then by cultivating and holding the moisture it will not be necessary to irrigate the growing crop, except on very light, sandy soils. If later irrigations are used the ground should be thoroughly cultivated after each irrigation. The writer has seen several fine looking fields that have failed to set beans because they have been irrigated too much and not cultivated enough.

**Varieties**—For the interior valleys of the State, the Blackeyes, Pinks, Pintos and Teparies are the most common varieties grown. These are the hardest varieties and will be more sure of making a crop than any of the others. The Mexican Reds and large Whites are not so hardy as the

above mentioned varieties, but grow fairly successfully in the interior valleys.

The Lima and small Whites are grown successfully in Southern California and in the southern coast counties, but are not recommended for the interior valleys.

**Insects**—The most common insect which the bean grower has to contend with is the ordinary bean weevil. The insect appears in the midsummer and enters the beans while they are still green in the pod. They remain within the beans during harvesting and threshing and continue to breed and reproduce within the stored beans. If the beans are planted late the trouble will be somewhat avoided, as the adult insect will have to deposit her eggs elsewhere before the bean pods have developed. This insect can be destroyed by fumigating with carbon bisulphide at the time the beans are stored, and if treated in this manner very little damage will result from this pest. Other insects which sometimes cause trouble are the black and the green aphids, red spiders, thrips and wire worms. The aphids can be avoided by planting late, as they do their work in the early part of the season. The red spider can be controlled by dusting with dry or spraying with atomic sulphur. There is no practical control for the thrips; it is one of the chances that the bean grower has to take. The wire worm begins by attacking the seed and continues working on the growing plant. No practical control measure has been worked out for this pest. 1500 pounds per acre of air-slacked lime has proven beneficial in eradicating the wire worm.

**Cost of Production**—It is very difficult to arrive at a definite average figure when considering the cost of production, as this varies greatly with individuals. However, the following figures may serve to give a few general ideas.

	Per acre
Plowing .....	\$2.00
Working before seeding four times at 35 cents each...	1.40
Cost of seed .....	2.00
Cost of seeding .....	.35
Cost of cultivating three times at 50 cents each.....	1.50
Cost of hoeing .....	1.00
Cost of harvesting.....	1.00
Cost of threshing, 25 cents per cwt.....	2.75
Sacks and cleaning of beans.....	1.60
<b>Total .....</b>	<b>\$13.60</b>

In most localities in the State for an ordinary season hoeing will not be necessary, so that this item might be omitted. On the other hand, the cost of irrigating is not figured, owing to the fact that it differs so much with the different localities. If the grower expects to irrigate he must add this item to the above table. The cost of the sacks, threshing, and cleaning are figured on a yield of 1100 pounds of beans per acre, which is about the average for the State.

These figures were computed when prices were normal, therefore considerable advance must now be reckoned.

**Threshing** Arrange with a competent thresherman, who understands threshing beans and who has a reputation for good work. Regular grain threshers will crack the beans, unless specially rigged. On a crop of such value, you cannot afford to have beans wasted by going out with the straw, nor can you have them cracked in the thresher. In hauling from shed, barn, or field to the thresher, cover the rack with canvas in case some beans should shell out, and also use canvas covers around the machine when threshing. This facilitates the cleanup and saves several dollars worth on each acre. Personally see to it that the machine has been properly cleaned if it has been working on a different variety, for if a mixture occurs the beans will have to be hand-picked at a large cost. A good way to clean the machine is to have a few sacks of grain run through between different varieties of beans.

**Value of Bean Straw** A side issue of the bean industry of considerable economic importance is the use that is made of the bean straw as food for stock. Sheep are fond of the pods and thrive on them. They are also valuable as a feed for dairy cattle. The food value exceeds that of cornstalks or oats straw and is only slightly inferior to timothy hay. It contains three times as much protein as oat straw, twice as much as corn stover, and a third more than timothy hay, according to the experiments of the Cornell Agricultural Experiment Station. Bean straw is now being converted into silage which greatly increases its value as fodder. It should be put into the silo as soon as threshed.



**Harvesting** When the leaves have about half fallen off, the beans are ready to harvest. You should have a regular bean harvester for large acreages, and this will pull two rows at once, leaving a winrow at the rear of the machine. If the weather permits, let them lie until partially dried, say from six to twelve hours, or longer in cloudy, cool weather; then throw them into bunches, and let them cure well before hauling. If they should be rained on, turn the bunches over with a fork, just as soon as they are dry enough on top. Make piles of such size that they can be picked up in one fork full.

If they are put in a stack, build it up straight, and cover with canvas or other suitable protection, and weighted down so that storms cannot get to them. Be careful to keep out sticks and stones, as these will not allow a good job of threshing. Beans are so easily injured by the weather that all other farm work should be dropped when they are ready to harvest, and no time lost until they are under cover or threshed. They should be threshed as soon as possible after being cured. If the pods are allowed to get dry and brittle, loss will occur from shelling if handled much or hauled a long distance.



Cutting Two Rows

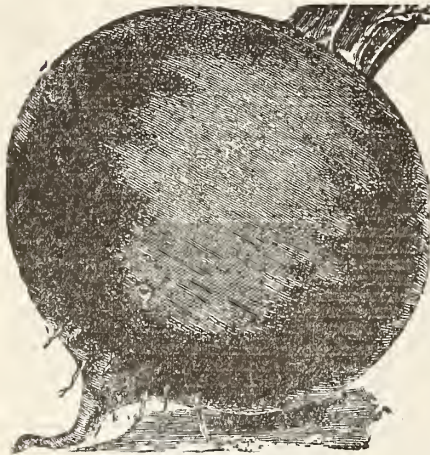
We have many inquiries from would-be growers for land suitable for growing beans. If you have any such land you wish to rent for one crop, we suggest that you list it with us. We may have an opportunity to send you a desirable renter.

## A & M Table Beets

**MARKET:**—Besides the every-day demand at the local market places, there is the seasonable demand from outside points and for this purpose planting should range from August 1st until January 1st. See the shipper for further information. The canneries too use a large acreage. If you are conveniently located you will be fortunate to secure a contract with one of them.

**Culture** Beets may be planted all the year round where the temperature does not fall below 25 degrees. Sow the seed one inch deep in well prepared, moist soil in rows eight or ten inches apart, or on ridges same as lettuce. Drill twelve pounds of seed per acre. Thin out to one plant every three inches, and transplant the discarded plants in any convenient spot about the garden. The Egyptian is a small, dark red, flat, smooth variety. It is sweetest and best for the table. Irrigate about every two weeks, unless the nature of the soil is such that more frequent irrigation is found to be necessary. Mulch the soil after each irrigation. Beets are ready for use in ten weeks and continue in prime condition for another ten weeks.

Two ounces of seed for 100 feet of row.



Crimson Globe

### Crimson Globe

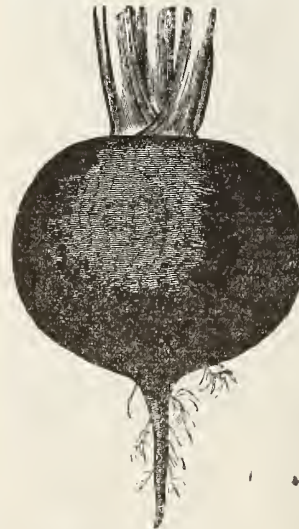
This splendid variety has now been grown quite extensively in many sections of the country and the many good reports received from old customers indicate that it gives most thorough satisfaction. It is of medium size, generally about three inches in diameter, very handsome in shape, with a remarkably smooth surface. It has a very small taproot. Gardeners prefer it for summer planting because the large foliage protects the beet. (Pkt. 5c) (oz. 20c) (¼ lb. 75c) (½ lb. \$1.25) (lb. \$2.25) postpaid.

**Eclipse** Is a favorite for the family garden, very sweet, tender and of fine texture. (Pkt. 5c) (oz. 20c) (¼ lb. 55c) (½ lb. \$1.00) (lb. \$1.85) postpaid.

When beet tops are young and tender they may be cooked as spinach and are as good. The stem may be par-boiled and pickled for immediate use.

**Early Crosby** A long time favorite for the family garden. (Pkt. 5c) (oz. 20c) (¼ lb. 75c) (½ lb. \$1.25) (lb. \$2.25).

**Extra Early Egyptian** The market gardener's favorite on account of its beautiful appearance, earliness, and excellent flavor. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.85) postpaid.



A. &amp; M. Bassano

### Early Blood Turnip

Of large growth. Flesh very tender and retains its blood-red color when cooked. On account of its tall leaves it is a favorite summer time beet with market gardeners. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.85) postpaid.

### Half Long Blood

Smooth, growing to good size, color dark red; top small, of upright growth. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.85) postpaid.

### A & M Bassano Beet

Excels all other varieties for table use. Its delicious flavor, entire absence of fibre, smooth symmetrical shape and small root puts it in a class by itself for all-round good qualities. The market gardeners have recognized this for years and many will have no other. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.85) postpaid.

### Detroit Dark Red

This is an ideal beet for all purposes. It cannot be excelled for the table; free from all fibre and very sweet. It is the best of all for pickling. Even the tops are good when pickled. (Pkt. 5c) (oz. 20c) (¼ lb. 75c) (½ lb. \$1.25) (lb. \$2.25) postpaid.

## GARDENING A SCIENCE—NOT ALL IS CHANCE

The vegetable grower is the greatest speculator in the world, particularly in Southern California, and portions here and there throughout the Southwest. He has all United States for a market during the winter months, and all the arid Southwest in the summer time. He must consider well his soil, be an expert in the selection and use of fertilizers, in the selection of his seed suited to his soil, to his climate, to the time of planting and the market for which he intends to grow. He must know to perfection when to irrigate to cultivate, and when not to do so. He must also know when and how to plough. He must not only keep posted as to

market conditions and prices, but must figure ahead on these conditions.

When giving consideration to their approximate yields and values, take into account the cost in labor, irrigation, time to mature, and expense of marketing. All these figure in determining the net profit. Then consider too the adaptability of each crop to your soil and the purpose for which the crop is intended. All must be considered when deciding the advisability of planting field crops.

When in doubt buy Aggeler & Musser's seeds, and always consult AGGELER & MUSSER SEED CO. on all the above subjects. And keep this catalog.



## A & M Stock Beets



**Mammoth Long Red**

A large variety always in favor with dairymen because it is rich, healthful to the stock, yields large tonnage per acre, and is easily gathered. (Pkt. 5c) (½ lb. 60c) (lb. \$1.00) postpaid; (10 lbs. \$8.50) f. o. b. here.

**Note**—Prices on half pound and pound quantities include postage or expressage prepaid. When sent otherwise deduct 10 cents per pound or fraction thereof. If desired sent by Parcel Post, necessary postage should be added. See our Parcel Post Schedule on cover page. If quantities are desired, do not fail to write for special prices, as all field seeds are subject to market fluctuations.

**Culture**—May be sown all the year round in drills one foot apart. Thin out to stand six inches apart in rows. Keep well cultivated; 8 pounds of mangel, or 10 pounds of sugar beet seed will plant an acre and yield 20 tons or more of beets.

Thirty to forty tons per acre of stock beets is no unusual yield.

### Half Sugar Rose

A distinct type of Sugar Beet, producing not only a good crop, but roots of giant size and richest feed quality. It has yielded 55 tons per acre, several tons per acre more than the heaviest producers of other sorts on the list. They have a small top, and are easily trimmed. The roots are heavy, but are so easily harvested that they may be up-rooted by a push of the foot. The flesh is white, solid, tender and very sweet and imparts a rich, pleasant flavor to dairy products, when fed to milch cows. Also particularly good for fattening hogs. Half Sugar Rose is a profitable Stock Beet to grow. (Pkt. 5c) (½ lb. 60c) (lb. \$1.00) postpaid; (10 lbs. \$8.50) f. o. b. here.

### Giant Yellow Intermediate

A large variety always in favor



**Sludstrup**

it the popular beet of that country. We are always on the lookout for something better to offer our trade. We are sure you will add dollars to your dairy by planting the Sludstrup. (Pkt. 5c) (½ lb. 60c) (lb. \$1.00) postpaid; (10 lbs. \$8.50) f. o. b. here.

### Mammoth Long Red Mangel

The largest Stock Beet. Yields 40 to 50 tons to the acre. Will grow in land containing more alkali than any other beet. All stock except horses eat it readily. (Pkt. 5c) (½ lb. 60c) (lb. \$1.00) postpaid; (10 lbs. \$8.50) f. o. b. here.

### Golden Tankard Mangel

Contains more sugar and less water than any other Mangel. Rich in milk-producing qualities, hence a favorite with dairymen. Horses will eat it. (Pkt. 5c) (½ lb. 60c) (lb. \$1.00) postpaid; (10 lbs. \$8.50) f. o. b. here.

### Klein Wanzleben

(Sugar Beet). This variety is without question the best in cultivation. Not the largest in size, but the richest in saccharine. It will fatten hogs as quickly as grain. (Pkt. 5c) (½ lb. 60c) (lb. \$1.00) postpaid; (10 lbs. \$8.50) f. o. b. here.

### Sludstrup

This variety is more extensively grown in Holland by dairymen than any other. Its uniform growth of large well-shaped beets rich in saccharine, its record for producing rich milk and sweet butter, has made

## A & M Swiss Chard

**MARKET**—Owing to the great scarcity of Spinach Seed, Chard is being planted instead and in large acreage because it is finding a ready sale on all the markets. As the housewife learns to prepare Chard for the table the demand will increase.

**Culture**—Same as for beets; transplant 12 inches apart in rows 18 inches apart.

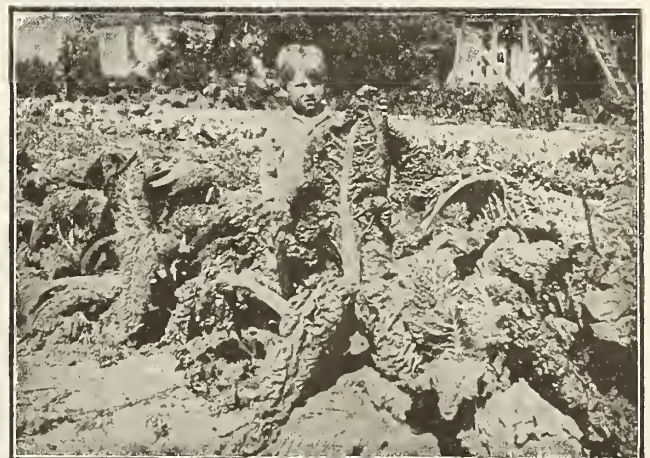
Grown for its leaves only; one of the best early greens. Cook the leaves as you do spinach and the stems in cream as asparagus. Leaves grow to enormous size, 20 inches to 2 feet in length. The plant is almost perpetual if kept trimmed, but it is better to have a new crop every year. The tender leaves make it a desirable plant for poultry greens; much more desirable than alfalfa, because it can be grown with less care and in any convenient place about the premises. Try it for your hens.

**Lucullus** (pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.20) (lb. \$2.00) postpaid.

**White Swiss** (pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.20) (lb. \$1.00) postpaid.

We have in this catalog studiously avoided listing a long line of inferior articles, but we offer only the best of everything, with instructions to the buyer when to plant each certain variety to procure the best results. If the instructions in this catalog are not followed with reasonable accuracy, failures may result. Therefore do not destroy this book as you need it constantly.

If interested in Potatoes read page 55.



**A Row of Lucullus Chard**

Make machinery do the work as far as possible. Owing to the drafting of an enormous army of workers from our country, the products of the soil are bound to be curtailed next year because the rancher and gardener will plant no more than he is sure he can harvest with his limited help.

This being true, the crop next year may be expected to fall below that of 1917.



# Marketing the Small Crop at Home

## READ CAREFULLY

THE FOLLOWING ARTICLE TELLS WHAT OTHERS ARE DOING, AND MAY SUGGEST WHAT YOU MAY DO TO ADD TO YOUR REVENUE.

If your home is situated by one of the many highways, where hundreds and even thousands of autos travel each day, you will have a very convenient market for your produce. If you have watched the growth of the many fruit, vegetable and flower stands by the wayside, you were interested and sometimes amused at the assortment of produce offered, and how the advertisements on the bulletins announce the commodities.



Market Place of Charles Richardson along the San Bernardino Blvd.

These signs indicate the thrift of the rancher that will have these various commodities for sale, and prosperity is in evidence all about the place.

But the wayside store has advanced far beyond the bulletin board. It is now a full-fledged Fruit, Flower and Vegetable store.

Study the above picture of a Fruit and Vegetable Stand along the San Bernardino Boulevard, belonging to Mr. Charles Richardson, who is obliged to employ constantly five clerks whose sole business is to wait on customers. It is not unusual to see as many as ten autos in front of this place at one time. His commodities consist of anything in season, and everything the best.

The following is a list of produce from his own ranch, and of his near neighbors, offered at his market place all in the same day. Such a list cannot be duplicated anywhere in the world except in Southern California.

Fruit	Vegetables	Melons	Miscellaneous
Apples	Green Beans	Watermelons	Poultry
Peaches	Bunch goods	Cantaloupes	Lemons
Pears	Onions	Casabas	Cider
Berries	Potatoes	Armenian	Vinegar
Grapes	Tomatoes	Golden Honey	Walnuts
Oranges	Sweet Corn	Honey Dew	Eggs
Figs	Squash	Citron	Flowers

Other stands are less pretentious. Here and there only one or two things may be offered, whatever the party may have in season. These places are sometimes attended by a child, the wife, aged or invalid person, and thus managed with the least inconvenience and expense to the rancher.

## A Word to Gardeners About Bunch Goods

This term is applied to vegetables that are tied in bunches, viz.—beets, carrots, radishes, turnips, parsnips, bunching onions, salsify, kohlrabi, and spinach. Every one of the above are all-the-year-round vegetables, and every one may be cultivated as lettuce, (see page 27.) The growing of these vegetables is not only for Los Angeles consumption, but they are shipped with other vegetables in carloads to all parts of the United States. The tops are cut off for shipping.

Keep in mind that Southern California is the winter garden of the United States. Therefore make your big planting of these vegetables, also lettuce, cabbage and cauliflower in August, September and October.

Read every page of this catalog. Then take good care of it, for you will need it from time to time throughout the year. Therefore keep this book until you get another.



Mr. Andrews place near Eagle Rock

These stores are no longer supplied alone by the rancher on whose place they are located, but by neighbors who do not live along the highway, and thus a community of interests is advanced producing a market for a neighborhood, adding to the general welfare. Therefore we suggest that each community living within each half mile or mile of highway, get together, select a cross-roads corner or other shaded place, build an appropriate and attractive rustic or wicker house with suitable fixtures, appoint a keeper, and each one supply the particular articles they may have in season.

A system of co-operation will soon determine what each one may set about to grow so that the store may be regularly and judiciously supplied. When there is a surplus of anything, let the store manager arrange to dispose of it with some commission house or dealer in the city. In this manner of co-operation a dozen ranchers may collectively have enough to market, while one man individually will have too little to be worth while, and thus many dollars worth of good things are sold which otherwise would be wasted, the value of which would total many hundreds of dollars.

Read this catalog carefully, that you may know what to plant each month, in order that the store may be regularly supplied. In that way a dependable trade will be established. People who pass regularly will learn to depend upon this store for their regular supply of things in your line. But you should aim to have a constant stock of everything in season.



Bunch goods for the East



# A & M Brussels Sprouts A & M Chinese Cabbage

Culture—Same as Cabbage.  
One oz. of seed will produce about 5,000 plants.  
For Aphis—Spray with "Black Leaf 40."

This excellent vegetable, considered the most delicious of all the cabbage family, is finding increased demand in the public markets, and should be grown more largely. It is a long season grower and ranks as to time with our late varieties of cauliflower. Therefore, seed should be planted for succession from July 1st until Nov. 1st.

The increasing demand has spurred us on to look for something better than has hitherto been offered on this market. We have succeeded in securing a medium dwarf variety that bears larger heads, and every joint a head. (Pkt. 10c) (oz. 40c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

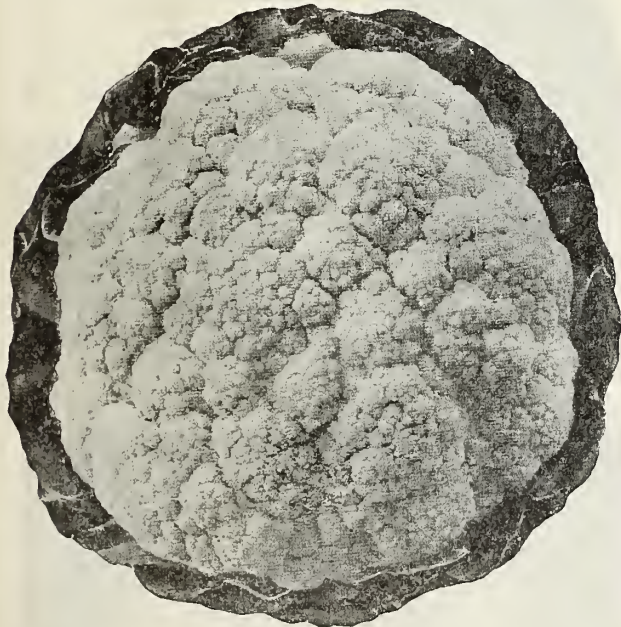
**Market:**—The demand for Brussels Sprouts is probable in excess of the supply, but the cost of production is so high that it must be classed as a luxury. We recommend it highly for the home garden.



Brussels Sprouts

## A. & M. St. Valentine Broccoli

Culture and market the same as Cauliflower.



St. Valentine

**Broccoli** (A hardy strain of Cauliflower) is grown largely in Oregon. Eighty-four carloads were shipped from the Umpqua Valley in the Spring of 1917. It is much harder than Cauliflower, readily withstanding a temperature of 15 degrees. Planted in July it matures in April, yielding nearly 100 per cent good heads regardless of weather conditions. Large gardeners will do well to plant it.

**St. Valentine** (A pure white strain) is the best. Our seed is of the English type grown extensively in the north. (Pkt. 5c) (oz. 60c) (¼ lb. \$2.00) (lb. \$6.00).

If your soil is alkaline, or sour, 1000 pounds of lime per acre will be of great benefit to your crop of cabbage, and do much toward destroying insect pests that might otherwise injure succeeding crops.

**MARKET:**—Local retail vegetable stands and carlot shipments to eastern markets.

**From The Produce News:**

"Geo. Shima nets \$1100.00 on a single carload of Chinese Cabbage."

"Seven carloads from seven acres."

"363 crates of 60 lbs. each sold at \$4.00 per crate. Deducting expenses, netted \$1100.00."

Aggeler & Musser Seed Co. furnished the seed.

**News Item:**

"More than 4000 lbs. of Chinese Cabbage is being shipped daily by express from Marysville, California, to a Chinese concern in New York City."

### A Neglected Opportunity

Why the local gardeners have not gone more earnestly into the growing of this delicious cabbage is beyond our comprehension, and why the shippers have so long neglected this opportunity to add thousands of dollars to the exports from this state is little short of stupid, when wide-awake Californians are never known to have let an opportunity get by.

Hundreds of carloads of this Chinese Cabbage are being shipped to Eastern markets from Florida and Michigan, which shows that it has an all year round market in the East, while here, the home of the Chinese Cabbage, we have neglected it, where we have always grown a strain that far surpasses that hitherto grown in the East.

Wake up to a good thing! Flood the Los Angeles market in order that our home people may become acquainted with it. Grow Chinese Cabbage and the demand for it will surprise you. Every home garden should have it.

Our seed is imported. It is the genuine article as pictured here and cannot be compared with the Pe-Tsai seed grown in Europe.

**Culture:**—Grow it as you do lettuce; transplant 10 inches apart in rows 12 inches apart.

Boiled with beef or pork it is excellent, having a much more pleasing flavor than cabbage. The inner leaves make better cold-slaw. (Pkt. 10c) (oz. 60c) (¼ lb. \$2.00) (½ lb. \$3.25) (lb. \$6.00) postpaid.



Chinese Cabbage

## TESTIMONIALS

**Mrs. John Ceedergrain, Hanford, Cal.**

"I can say your Chinese Cabbage is the best of all sorts of cabbage. I hope to get some more just as good."

**Harry Erickson, Center, Wash.**

"The Chinese Cabbage I grew from your seed produced a fine crop which sold better than other varieties of cabbage or lettuce. It is the real Salad Lettuce."

**For the Cabbage Worms:**—We do not hesitate to recommend Paris Green to be used up to two weeks before marketing the cabbage, because the spray only reaches the outer leaves that are not eaten, and because within two weeks the elements neutralize the poison. Also when only one tablespoonful of Paris Green is mixed with four gallons of water and kept well agitated there could not possibly be poison enough on a head of cabbage to even make anyone sick.

Mr. Smith, Demonstrator for the Home Garden Committee at the Examiner Garden, says there is nothing like Paris Green to clear the cabbage of both aphids and worms.

**For Aphis:**—Spray with Black Leaf 40. Directions: One tablespoonful to two gallons of water. Add about ¼ lb. of soap.



# A & M Cabbage

It should be borne in mind that the big planting of cabbage is intended to meet the eastern demand in midwinter and early spring, and that our time of planting is out of the natural season, and therefore often subjected to unseasonable weather which causes it to be stunted and often shoot to seed. The wonder is that any of it matures.

Improper culture, too, will stunt the normal growth of cabbage and cause the heads to prematurely go to seed.

**Culture**—The secret to grow hardy plants is to thoroughly prepare the soil in the plant bed. Loosen the soil to a depth of eight or ten inches, pulverize well. Sow in drills not too freely, about one-half inch deep, press the soil firmly over the seed; this is important. In about six weeks transplant in rows three feet apart, one foot in the row for Winnigstadt, eighteen inches for large-heading varieties. Keep the crop well watered and cultivated for when growth is checked the seed head matures and bursts forth as soon as moisture is again applied. This accounts for much cabbage going to seed. Early varieties mature about three and one-half months after transplanting, late varieties in about five months.

Should there be a cold spell when the thermometer lingers below 25 degrees, just at the time the cabbage begins to head, you may expect twenty-five per cent of your crop to shoot to seed.

One large and constant grower says: "November transplanting escapes the hard winter season that causes so much loss by shooting to flower."

**Marketing**—The everyday demand at the local market should be met with the most palatable varieties like the A. & M. Early Drumhead, Copenhagen Market and Glory of Enkhuizen.

For Sauer-Kraut, plant seed about April 1st of the Large Flat Dutch and the Autumn King. The manufacturer does not want it earlier than October.

The largest acreage is disposed of by the shipper and for this purpose the main planting of seed is October 1st.

The enormous values realized by growers last season should not be given consideration in your calculation this season; for instance, such figures as \$650.00 from one load carried on a two-horse wagon and trailer; a thousand dollars an acre, and so on. Three hundred dollars per carload is good money, but you may reasonably expect \$400.00 per carload this coming season.

Bear in mind that Southern California is the winter garden for the United States.

**Hollander** Is one of the best of all the hard heading varieties. The heads are thick, round, of medium size and solid as a rock; of good flavor and heads well in our winter climate. It is a desirable sort for gardeners. (Pkt. 5c) (oz. 70c) (¼ lb. \$2.00) (½ lb. \$3.00) (lb. \$6.00) postpaid.

**American Drumhead Savoy** The best of all Savoy. Short stump, large size, solid head. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (lb. \$5.00) postpaid.

**Improved Red** Heads of deep color and remarkably solid. Excellent for slaw. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (lb. \$5.00) postpaid.

**A & M Early Drumhead** Year by year this desirable sort becomes more and more popular. It is very early, tender, crisp, and just the right size for the dealer. Truckers like it because every stalk produces a head. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (½ lb. \$2.75) (lb. \$5.00) postpaid.



A. & M. Early Drumhead

**Bran Mash for Cut Worms**—Paris Green 1 lb., lemons 3, molasses 2 qts., water 3½ gals., bran ½ bu. Mix bran and Paris Green dry; cut lemons into fine pieces. Mix all thoroughly.

## A & M Scott's Cross



Scott's Cross

The introduction of this cabbage into the Southwest means millions of dollars to the growers. An ordinary average yield of Winnigstadt per acre is eight to ten tons. Scott's Cross will average twelve to fourteen tons of a better grade. This means about fifty dollars per acre more at no greater expense.

Scott's Cross is one of the best to grow for shipping. It is a cross between the Winnigstadt and the

Flat Dutch. It promises to outrank the Winnigstadt, but up to the present time there has been some variation as to its type and uneven maturing, but it is such an excellent cabbage because of its hardiness that we have contracted with our seed grower to make a perfect type by selection. Our 1917 crop will be a perfect type of the Scott's Cross, as pictured here. The grower and shipper will then agree that a perfect all-purpose cabbage has been attained. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.65) (½ lb. \$4.00) (lb. \$8.00) postpaid.

## Winnigstadt



Winnigstadt

No other vegetable listed in our catalog has retained its popularity so continuously and for such a long time as our Quedlinburg strain of Winnigstadt Cabbage, introduced by us in 1896. It is now, and has been ever since that date, the most popular cabbage grown on this Coast. It is popular because it is early, solid, good flavor, sure header, and good shipper. (Pkt. 5c) (oz. 60c) (¼ lb. \$2.00) (½ lb. \$3.00) (lb. \$6.00) postpaid.

## Danish Ballhead

Since our introduction of this short-stemmed type of the Danish Ballhead, it has rapidly grown into popularity with both the grower and the shipper. Why? Because it is a sure header, adaptable to all soils, rarely

shoots to seed even in most unfavorable conditions. Heads are solid and uniformly round. It is a good shipper and is not surpassed for table use. (Pkt. 5c) (oz. 60c) (¼ lb. \$2.00) (½ lb. \$3.00) (lb. \$6.00) postpaid.



Danish Ballhead Short Stemmed



## Copenhagen Market

Our European grower has given great praise to this variety. It is earlier, larger and better than the Winningstadt for the local market. It is grown more extensively for the markets of Northern Europe than any other variety. It excels because of its extreme tenderness and delicious flavor, which is compared with cauliflower. We give it urgent recommendation to growers for the same market and for home gardens. (Pkt. 10c) (oz. 75c) (¼ lb. \$2.20) (½ lb. \$3.50) (lb. \$6.50) postpaid.



Copenhagen Market

**Henderson Early Summer** A good medium-sized early flat head, very desirable for the table. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (lb. \$5.00) postpaid.

**All Seasons** The heads are extremely solid, round, flattened on top and ready to market nearly as early as Early Drumhead, while considerably larger in size. It is called "All Seasons," because it is as good for autumn or winter as for early summer. (Pkt. 5c) (oz. 50c) (¼ lb. \$-50) (½ lb. \$2.50) (lb. \$4.50) postpaid.

**Large Late Flat Dutch** The standard sort for late crop. A large, sure header. (Pkt. 5c) (oz. 50c) (¼ lb. \$1.50) (½ lb. \$2.50) (lb. \$4.50) postpaid.

## Glory of Enkhuizen



Glory of Enkhuizen

The grower when introducing this variety pronounced it the ideal cabbage for the home and for Kraut surpassing all others in excellence of quality and flavor. It is similar in shape and habit to the Danish Ballhead, just ideal for the local market. (Pkt. 5c) (oz. 60c) (¼ lb. \$2.00) (lb. \$6.00).

**Autumn King** For four years this Giant Cabbage has astonished all who have seen it at the market. Heads weighing from forty to fifty pounds are not uncommon. It is tender and of excellent mild flavor, ideal for sauerkraut, and it will yield more tons of good cabbage per acre than any other variety. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (½ lb. \$2.75) (lb. \$5.00) postpaid.

## MARKET GARDENING



A FIELD OF LETTUCE

Notice in this picture the method of planting two rows on a ridge. It is now generally practiced by the large gardeners, and should be applied in the home garden. The drainage this method affords produces cleaner, better and earlier vegetables.

Remember your garden in Southern California works all the year; every month you may plant some seed that will keep fresh vegetables for your table every day in the year. Consult page 10.

The following is a list of vegetables that should be planted the way we have illustrated in the picture:

Beets	Kohl Rabi	Parsley	Salsify
Chard	Lettuce	Parsnip	Spinach
Carrot	Onion	Radish	Turnip



How to Plant Cauliflower and Cabbage

## PROPER WAY TO PLANT CABBAGE AND CAULIFLOWER

**Notice:** The plants have been trimmed of all surplus foliage. By doing this the scant roots have only the heart of the plant to feed.

**NOTICE:** Also that the plants have been set on the shady side of the furrow. This is to avoid as much as possible the direct rays of the sun until the plant has a good start.

**NOTICE:** The furrows have been irrigated as soon as the plants have been set. This is intended to settle the soil closely about the roots, as well as to furnish moisture. As soon as the soil is tillable, cultivate and endeavor to throw the soil toward the plant. Within fifteen days cultivate again, using a four-inch shovel in the middle. This time the roots will be six or eight inches below the surface, and the furrow will be ready for the next irrigation when needed. In this way transplant Cabbage, Cauliflower, Tomatoes, Peppers, and many other plants, but not all. Sweet Potatoes are exceptions to this. See such goods page 24—read pages 1 to 10).



# A. & M. Cauliflower

**Market:**—The local market consumes and distributes great quantities of early Cauliflower beginning November 1st and throughout the season until July, but it is the shipper who disposes of several thousand carloads. 25c a dozen heads was considered profitable but last season the prevailing price was 75c per dozen.



Early Pearl

**Culture**—Prepare the soil as for cabbage. Seed may be sown from June to the following March. Transplant when the plants are six to seven weeks old. When the stems have become hardened in the bed they will be likely to head prematurely. Set out the plants 18 inches apart, in rows three feet apart. Cauliflower should be kept growing constantly, as it may be injured by a check in any period of its growth, and go to seed; hence, irrigate freely. One ounce of seed produces 2,000 plants; six ounces to plant one acre.

Last season again demonstrated the necessity of proper judgment as to time of planting, and also the important influence of the elements. Only a few years ago no grower planted cauliflower earlier than August, but year by year growers are crowding toward early planting, until now May and June are considered a proper time to plant, with the uncertain result that sometimes they succeed and sometimes they fail to have good results.

A crop failure in August must not be attributed to the seed.

Year after year finds the market flooded with first class cauliflower from November until April. The Snowball variety prevails until January 1st, after which it is all the Early and Late California Pearl.

**California Pearl Cauliflower** This variety is a favorite from California to New York, because of its excellent shipping qualities. It originated here and has made Southern California famous for her excellent cauliflower. The California Pearl is thoroughly adapted to a semi-tropical climate and is particularly suited for shipping because of the flower being completely enveloped within spiral curled leaves, which protect the flower from injurious exposure to rain, sunshine or frost, but particularly from injury in packing and in transit. It retains its fresh appearance longer than any other variety. It is decidedly the shipper's favorite. It is the gardener's, the dealer's and the consumer's favorite. To be packed for shipping it is only necessary to cut the stem at the base of the head, and the leaves about four inches above the head. This leaves foliage enough to cover the crown without wrapping in paper. These heads are packed two layers in a crate (16 inches deep), with the base at the top and bottom, the crowns facing in the center, usually 24 heads per crate.

The small grower may plant at any time from May until February, but for profit the shipper should carefully pursue instructions given with each variety.

When you consider that the amount of cauliflower shipped from California each year runs into thousands of carloads, valued at nearly \$1,000,000, and practically all of it is the California Pearl, the value of this type is of so great importance that we are proud to have been the introducers of it. At the time of the introduction, about the year 1900, we had only the late variety that required seven months from the time of planting seed. By selection we developed one to mature in five months. Do not be impatient for the heads to appear. They will grow to mature size in two weeks from time of starting to head.

**Early California Pearl** Attains a height of two feet. Plant seed from June 1st until November. In six to eight weeks transplant twenty inches apart in rows two and one-half feet apart. (Pkt. 15c) (¼ oz. 80c) (oz. \$2.50) (¼ lb. \$8.00) (lb. \$24.00) postpaid.

**Late California Pearl** Attains a height of three to four feet. Plant seed July 1st to March 1st. In six to eight weeks transplant two feet apart in rows three feet apart. (Pkt. 10c) (¼ oz. 50c) (oz. \$1.50) (¼ lb. \$6.65) (lb. \$20.00) postpaid.

**Extra Early Snowball** Has proven perfectly satisfactory for the past twelve years. Planted in June it can be marketed in November. It is the best early cauliflower yet offered by any seed house. We have one customer who has bought ten pounds of this



Extra Early Snowball

seed for twelve consecutive years. He grows it in peat lands and always plans to market his crop from November 20th to January 1st. (Pkt. 25c) (¼ oz. \$1.50) (oz. \$5.00) (¼ lb. \$15.00) (½ lb. \$25.00) (lb. \$45.00) postpaid.

**California Mommoth** Medium early. Is the largest variety grown anywhere in the world. It is not uncommon to attain 16 inches in diameter, while 10 and 11 inches is the average. It is of California origin. (Pkt. 10c) (oz. \$1.75) (¼ lb. \$5.00) (lb. \$15.00) postpaid.

**Autumn Giant** Heads large, firm and compact, thoroughly protected by foliage. (Pkt. 10c) (oz. \$1.75) (¼ lb. \$5.00) (½ lb. \$8.00) (lb. \$15.00).

**Danish Giant or Dry Weather** Dry Weather Cauliflower merits the confidence of all growers as an all year round variety. It has proven conclusively to be the best for early planting. We give it special recommendation for the first early and late planting. It requires rich soil and good cultivation, but will withstand more drought than any other variety. (Pkt. 25c) (oz. \$5.00) (¼ lb. \$15.00) (lb. \$45.00) postpaid.

**Early Cauliflower** Scarcely a year goes by that does not bring out some complaint from someone that the Snowball variety heads out too quickly. It is the grower's impulse to blame the seed. It is sometimes almost impossible to account for it in each individual instance, but when we sell many pounds of seed to many customers, many having good crops and a few failures, it is unreasonable to attribute the cause to the seed.

We have always advised against too early planting, because of the danger of having excessive heat. Another cause of early heading is the flooding and baking of the seed bed, or after transplanting, irrigating and allowing the soil to bake. The cause in each case is excessive heat.

Therefore seed of the Early variety planted in May, June, or July, or improperly irrigated and cultivated, is subject to the danger of too early heading. Aggeler & Musser Seed Co. will not assume any responsibility for such failures, because the seed is not at fault.

## Now, a Hint to the Rancher

The cold storage man conserves only perishable produce; You cannot very well do that.

The warehouse man conserves products that are not readily perishable, such as potatoes, beans and grains of all kinds.

Would it not be advisable for you, if you can afford it, to be both grower and middle-man. If you can afford to do so, grow such crops as can be warehoused. Don't sell at harvest time, but hold until the time of advance and get the benefit that goes to the middle-man. If you cannot afford it, don't complain; be industrious and the day will come when you can afford to do so.



# A & M Table Carrots

Gardening Made Easy. See page 5.

Sow one ounce of seed to 100 feet of row, four pounds per acre.

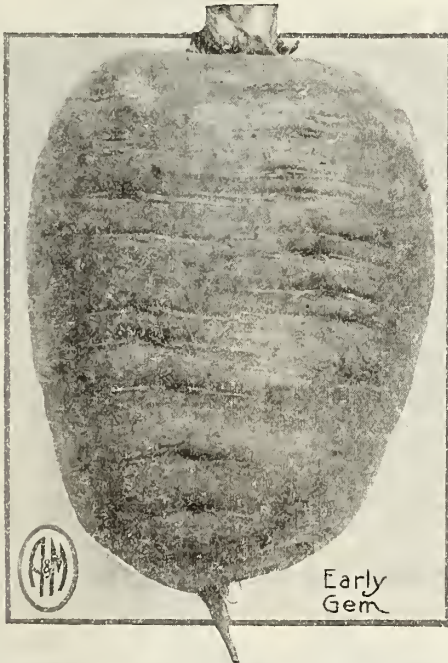
Carrots are very profitable because of the large quantity that a small patch can produce, and there is no waste, as any surplus may be fed to rabbits, poultry or other animals.

Carrots may be planted all the year round. Sow the seed from one-half to one inch deep in rich, moist, loamy soil, well prepared. Sow in rows eight inches apart, and as thin as the drill can be set to sow, or, if sown by hand, aim to leave two seed to the inch, or sow on ridges same as lettuce. Plant the Oxheart variety. It is the best for the table, and the most attractive for the market. The carrot has no insect enemies. It is a profitable crop to grow. Irrigate same as for beets. Carrots are ready for use in eight weeks and remain palatable for six months longer.

**Market:**—The local demand for Carrots is all the year round, but the chief demand is from the shipper who wants them from December 1st until May. For this trade the seed should be planted in August and September. The shipper wants the Chantenay, Oxheart and Danver Half Long.

The canning of carrots is now a large factor, and favorable contracts may be secured.

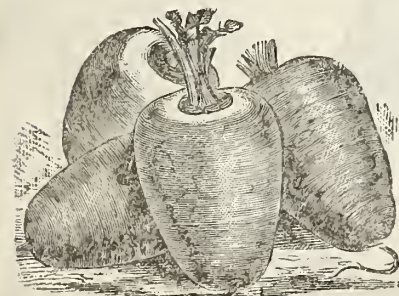
There are many rabbit hutches within the city where carrots are used throughout the year. If you live a convenient distance from one of these places you may be able to secure a contract from the owner to furnish carrots.



Early Gem

**A & M Early Gem** Somewhat resembles the Guerande or Oxheart, but is more uniform in shape, of finer texture and almost entirely free from the core usually found in other varieties. Flesh deep red, very tender and delicious in flavor. The roots generally attain from four to five inches in length and about three inches in diameter, although they have been grown to nearly double these dimensions. For bunching, the handsome appearance is a marked advantage over all other varieties. It is a favorite with many market gardeners. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (lb. \$2.25) postpaid.

## Early French Forcing



Early French Forcing

A small sort, but desirable on account of its extra early habit. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (lb. \$3.00) postpaid.

## Danvers Half Long

The roots are smooth and of a rich, dark orange color. One of the best sorts for a main crop, because it remains edible in the field longer than other varieties. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (lb. \$2.25) pre-paid.

**Guerande, or Oxheart** Beautiful shape and color. The roots generally attain four or five inches in length and about three inches in diameter. Quality first rate, very tender, like the Early Gem, is the market gardener's favorite. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (lb. \$2.25) postpaid.

**Improved Long Orange** A deep orange colored variety adapted for farm or garden culture. (Pkt. 5c) (oz. 25c) (¼ lb. 70c) (lb. \$2.00) postpaid.

**Chanteney** Flesh is a deep golden orange color, always smooth and fine in texture, very tender. (Pkt. 5c) (oz. 25c) (¼ lb. 70c) (lb. \$2.00) postpaid.



Oxheart



Chantenay

# A & M Stock Carrots

Carrots are healthy food for stock of all kinds, and should be more generally grown.

**Culture:**—Drill in rows 12 inches apart, and thin to three inches apart in the row. It requires five pounds of seed to plant an acre. See page 5.

**Half Long White Belgian** Is raised exclusively for stock. Grows to a very large size; is easily gathered. Makes splendid food for cattle, horses and hogs; known to yield forty tons per acre. Will keep four or five months after pulling. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

**Large Yellow Belgian** Is similar to the above, but with a light orange color; said to be richer, but does not keep so well. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

**Half Long Giant White** The largest of all stock Carrots, and desirable because it does not grow to a great depth, and although six inches in diameter, there is no hard core. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

**Mastedon (Cow Horn)** Desirable because it stands well above ground, thus being easily harvested. Although six inches in diameter, there is no hard core. We give the Mastedon special recommendation to dairymen. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.

## A Little Hint to the Newcomer

You have purchased your land, but you are all at sea about season. What to plant and when to plant it is a puzzle; just read this catalog, and you will find the answer. But that is not all; you want more advice. Well, just write us, stating the nature of your ranch with regard to the following conditions,—sandy, loam, adobe, swamp, mesa, foothill, irrigation, acreage, and proximity to market. Are you a gardener or rancher? We may advise you to plant beans in the fall during September and November. When they are marketed plant potatoes or corn (as your conditions may suggest). When this crop is harvested plant potatoes again and casabas. Thus you will have three crops within twelve months. Such information is often a surprise to the new-comer, but the great Southwest is full of surprises and great possibilities.

As soon as you have learned the trick, you are one of "us," and your letters home will cause your friends to say: "There is another California prevaricator." You just can't make them believe it until they come.

Write to College of Agriculture, Berkeley, Cal., for Circular 121, entitled "Some Things the Prospective Settler Should Know."



# A & M Celery

**Culture**—Sow one-half ounce of seed to 100 feet of drill;  $\frac{1}{4}$  lb. per acre. Sow the seed from Jan. 1st to May 1st, in drills six inches apart, not too thick in the row to secure stalkly plants. In June when the plants are strong, transplant to furrows three feet apart and six inches deep. Set the plants six inches apart in the furrows; as the plant grows fill the earth toward the plant to secure proper bleaching. Never allow dirt to rest on the heart of the plant. Never work in celery when it is wet with rain or dew. Spray frequently with Bordeaux.

## IMPORTANT:

**Celery Rot** Do not allow water to stand during the heat of the day after irrigating. It will cause Celery Rot in the early crop.

**Seed Stem** Cultivate as soon as possible after irrigation; also when transplanting hot house plants, see that they are thoroughly hardened to the weather before transplanting. We are indebted to Rice Brothers for this information, and they demonstrated conclusively that this is correct. Failure to adhere to this rule will account for much of the celery going to seed.

**Hollow Stem** When the growth is rank and the stalks so close that free ventilation of air is retarded, the stems become soft and hollow; therefore, we recommend single-row planting.

**Market:**—The local consumption and outlying distribution disposes of a very large acreage but owing to its erratic nature it requires peculiar soil and professional culture. Therefore, there are few localities where it can be forced to earliness. May, June and July celery brings a high price to the grower. Then there comes an oversupply until the shipper disposes of it. When a surplus exists cold storage is resorted to, with doubtful profit, on account of the perishable nature, the shrinkage and the expense.



Actual Photograph of Golden Self-Blanching Celery, from California-grown Seed Grown by Capt. Nelson

**Golden Self Blanching** (California grown seed.) Another year has demonstrated that our strain of California grown seed is equal to the imported in producing good celery.

Every grower in Florida that tried our California grown seed in 1915 and 1916 ordered again in larger quantities for 1917. The seed we now offer was grown by an expert whose seed is now accepted by all who have used it as fully up to the imported. We now offer it to you with our full recommendation. (Pkt. 10c) (oz. 60c) ( $\frac{1}{4}$  lb. \$2.00) (lb. \$4.00) postpaid.

California Grown Golden Self-Blanching Celery Seed is now the accepted standard throughout the United States, and is giving such complete satisfaction that American growers are now accepting it with absolute confidence, asking only to know the reliability of the seed. That ours is reliable is proven by a three-year record of satisfied growers.



Blanching Celery with Boards

## Giant Pascal

It is a green top, much superior to the California green top. It is a great favorite in the eastern gardens. (Pkt. 5c) (oz. 35c) ( $\frac{1}{4}$  lb. \$1.00) (lb. \$3.00) postpaid.

## Calif. Giant White Plume

Best for home garden. We have now the grandest strain of White Plume Celery ever offered to the market gardener. One stalk frequently weighs above five pounds. It is solid, and crisp, with a decidedly salty flavor derived from the alkaline soil in which it was grown. On the peat lands it attains its highest perfection. (Pkt. 5c) (oz. 40c) ( $\frac{1}{4}$  lb. \$1.25) (lb. \$3.50) postpaid.



**Celery Seed for Flavoring** Per lb. 50c postpaid



CELERIAC

## Smooth Prague, Celeriac

A large celery flavored root used extensively for flavoring soups, pickles, etc.; also relished sliced as a salad with pepper and vinegar. It is also used to flavor salad. (Pkt. 5c) (oz. 35c) ( $\frac{1}{4}$  lb. \$1.00) postpaid.

A letter from Mr. Harry Bailey, who makes a specialty of growing Celeriac, says: "Save me  $\frac{1}{2}$  lb. of your Celeriac if it is the same I got last fall. It is the best I ever had."

Write College of Agriculture, Berkeley, Cal., for Bulletin No. 208, entitled "The Late Blight of Celery." See list of agricultural books, page 8.

## NOTICE

## NOTICE

## NOTICE

Do not fail to read all foot-notes at the bottom of the page; they are there to fill up space, but they are also full of information, valuable to you.



# A & M Sweet Corn

## HINTS TO MARKET GARDENERS

Plant Early Adams in February. Plant Oregon Evergreen every two weeks from March 1st until August 1st. From August 1st until October 1st plant Large Adams. For the home garden plant Country Gentleman and Golden Bantam every two weeks from March 1st until October.

**Market:**—There is a uniform local demand for sweet corn throughout the season, from the earliest day it is offered until the last field is harvested. Therefore, prepare to have some coming all through the season. Oregon Evergreen has not been surpassed since we introduced it twelve years ago; it is yet the best.

**Note—Prices on half pound and pound quantities include postage or expressage prepaid. When sent otherwise, deduct 10 cents per lb. If desired sent by Parcel Post, necessary postage should be added. See our Parcel Post schedule on cover page. If large quantities are desired, do not fail to write for special prices.**

**Culture—Plant from February 15th to September 1st in hills 18 inches apart, in rows three feet apart. Allow two stalks to the hill, break off all side shoots; cultivate after each irrigation until the corn shades the ground; irrigate every two weeks until in the milk, then once or twice a week, and this will produce a solid tight husk, which will prevent the worms from doing much damage.**

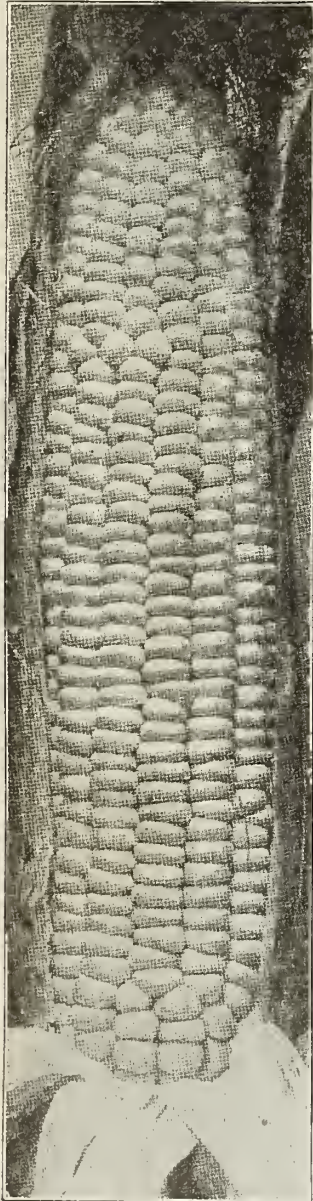
We are ever on the lookout for something better than that which we have. We are constantly trying out new varieties that show merit, but we studiously refrain from offering to our customers anything new unless it is better than that which we have. It is this policy that has kept the Oregon Evergreen so prominently before you for twelve years as the money-maker for the market gardener. Read what follows.

### A & M Oregon Evergreen

Oregon Evergreen Corn now has the endorsement of every gardener that grows for the Los Angeles market. We are safe to say that any gardener growing this will show to his customers its superiority over all other sweet corn. It is many years since we first offered this new and distinct variety. The demand has grown each year until it is now practically the only variety offered on the Los Angeles market. This excellent sweet corn has made wide progress in popularity during the

Oregon Evergreen

season just past. It leads all other varieties at Portland, Oregon. The peddlers will have no other and one no longer hears the consumer complain about the poor quality of the California sweet corn. The advantages of this corn over all others are its earliness, its large size, rarely less than eight inches long, clear of husk. The grains are full to the tip. The husk is very thick and folds so tightly over the grains that the worm does very little damage, compared with other varieties. It is desired by the peddler and groceryman because of its thick husk, and it can be held over two days before it appears old or wilted. It is very productive, averaging three good ears to every stalk, often bearing five marketable ears. (Pkt. 10c) (1 lb. 50c) postpaid; (10 lbs. \$3.75) f. o. b. here.



### A & M Early Adams

This is a blend between the Oregon Evergreen and the Eastern Extra Early Adams. The superiority of this strain over the former eastern-grown Adams is shown in its earliness, large size and sweetness. It is nearly as good as the Oregon Evergreen, and is earlier and harder. It is one of the many good things that originated here. Years ago when frost destroyed about all early vegetables, many gardeners plowed under their Early Adams, thinking it, too, was destroyed, but one large grower near Los Angeles for some reason did not disturb his field, and was surprised to see it revive and produce a good crop, as though undisturbed by frost. This grower was selling corn three weeks earlier than others, and demonstrated that frost will not destroy this variety when quite young. (Pkt. 10c) (lb. 30c) postpaid; (10 lbs. \$1.50) f. o. b. here.

Mr. H. D. Grundt of Wasco, Cal., writes: Your A. & M. Early Adams planted at the same time with large white corn was cut four weeks earlier and produced as much corn per acre. I prefer it for field corn because it gave me the use of my ground a month earlier for fall planting.

### A & M Large Adams

This is the best market variety to plant in August and September for late crop. It will mature in 56 days. (Pkt. 10c) (lb. 30c) prepaid; (10 lbs. \$1.50) f. o. b. here.

### A & M Large Adams in Imperial Valley

"I am shipping by express one dozen of Adams Late corn to show how it did in the hottest season we have here. Would have done better but we were short on water. I think it will do fine here planted early or late, about the middle of August. It sells better here than the Mexican or Squaw Corn."—W. E. Hixson.

### Golden Bantam

Probably the very earliest variety grown. Very sweet, none better for the home garden for first early. (Pkt. 10c) (lb. 55c) prepaid; (10 lbs. \$4.25) f. o. b. here.

### Mammoth White Cory

This new strain is as early as the original Extra-Early Cory, with ears of larger size, and kernels more compact. Cob and kernel are pure white. (Pkt. 10c) (lb. 50c) prepaid; (10 lbs. \$3.75) f. o. b. here.

### A New Corn, Evergreen Gentleman

Country Gentleman hybridized with Stowell's Evergreen. Both the Stowell's Evergreen and the Country Gentleman have long been recognized as the standards of perfection in good sweet corn. With Country Gentleman the favorite for the table, but lacking in size, it was not profitable, therefore not popular with the grower. For many years we have endeavored to produce a larger Country Gentleman Sweet Corn, with the result that we have by hybridizing it with the Stowell's Evergreen, succeeded in getting a sweet corn that is larger than either parent. Each ear has twenty-two straight rows of small, deep grains, with all the sweetness peculiar to the Country Gentleman. It is prolific and meets every requirement so much desired by both the grower and consumer. (Pkt. 10c) (¼ lb. 15c) (½ lb. 25c) (lb. 45c) postpaid; (10 lbs. \$1.50) f. o. b. here.

## Pop Corn

**Rice** Sharp pointed grain is preferred by vendors, but is not profitable to grow here at usual prices because of the devastations of the worm. Per (Pkt. 5c) (¼ lb. 10c) (lb. 30c) postpaid; (10 lbs. \$1.50) f. o. b. here.

**Pearl** This is the variety so extensively and profitably grown locally. It yields enormously and at three cents per pound is very profitable, but for several years the grower has received four cents per pound for the entire crop. (Pkt. 5c) (¼ lb. 10c) (lb. 30c) postpaid; (10 lbs. \$1.50) f. o. b. here.

**Yellow** Large smooth grains of Golden Yellow color. It pops large, has excellent flavor and is the most profitable to grow, but does not sell as readily as the Pearl. (Pkt. 5c) (¼ lb. 10c) (lb. 30c) postpaid; (10 lbs. \$1.50) f. o. b. here.

That Los Angeles county has "tremendous resources wholly undeveloped and which are susceptible of development," is shown in the final report on agricultural lands and crops in this county, submitted recently by Registrar of Voters Lyons to the County Council of Defense.

The report shows that of the 2,689,280 acres in Los Angeles county, 1,085,732 is "absolutely waste land, agriculturally." Other acreage is as follows: Irrigated area, including fruits of all kinds, 222,041 acres; in use for dry farming, 221,212 acres; possible to cultivate for dry farming, 286,831 acres; possible to develop or obtain water for, 358,719 acres.

In tabulating the reports on sundry crops, we find as follows:

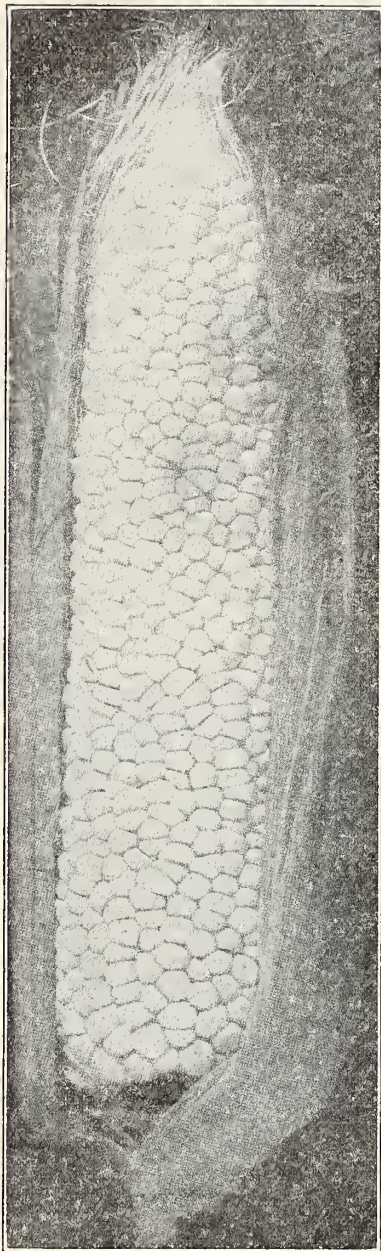
"Beans, 51,247 acres; spring potatoes, 15,100 acres; winter potatoes, 13,600 acres; beets, 36,592 acres; corn, 72,020 acres; onions, 310 acres; tomatoes, 17,000 acres; melons, 680 acres; hay, grain, etc., 87,625 acres; walnuts, 8,100 acres; cabbage, 1805 acres; celery, 3245 acres; lettuce, 2870 acres; miscellaneous vegetables and home gardens, 19,211 acres; total 326,822 acres.

"Used for enclosed pasturage, dairying, chickens, etc., 153,216 acres.

"Vacant lots planted in 1917 (never used before), 3875 acres.



## Country Gentleman



Country Gentleman

**Papago** Something in corn new to us, but, like the Tepary bean, it has long been known to the Papago Indians. We are offering it because it has great merit as a drought-resistant variety, growing luxuriantly in arid places where other varieties fail. We offer it as a sweet corn because it is sweeter, much more tender, and better for table use than field corn.

The Department of Agriculture of Arizona discovered this corn with the Papago Indians, and because of its luxuriant growth, were sufficiently interested to station an expert on the ground who in four years bred up the strain of Papago we are now offering you.

J. F. Callahan, La Mesa, Cal. is enthusiastic over the Papago. He writes: I am sure it is O. K. to eat green or dry. The stalks grow twelve feet high and have dark green foliage. It bears two to five ears.

(Pkt. 10c) (½ lb. 20c) (lb. 45c) postpaid.

Mrs. A. de la Mix, Naalehu, Kauai, T. H., writes that the Chayote was grown in Portugal from time immemorial and its Portuguese name is Pipinola. She also advises that when peeling, hold the hands under water as the liquid stains and draws the skin, but does no lasting harm.

A delicious sweet corn. The ears are somewhat smaller and less showy than the coarser varieties, but for private family use, where quality is preferred to size, it is excelled only by the Golden Bantam. The cob is very small, giving great depth to the kernels. The great merit of "Country Gentleman" is its fine quality. It matures in ten weeks. (Pkt. 10c) (lb. 40c) prepaid; (10 lbs. \$2.50) f. o. b. here.

### Stowell's Evergreen

If planted at the same time with earlier varieties and at intervals of two weeks until July 1st, it will keep the table supplied until November. It is hardy and productive, very tender and sugary, remaining a long time in a fresh condition suitable for cooking. (Pkt. 10c) (lb. 40c) prepaid; (10 lbs. \$2.50) f. o. b. here.

### Early Minnesota

An excellent sweet corn of extra early habit. (Pkt. 10c) (lb. 40c) prepaid; (10 lbs. \$2.50) f. o. b. here.

### Early Mammoth

Produces the largest ears of any early sort. (Pkt. 10c) (lb. 40c) prepaid; (10 lbs. \$2.50) f. o. b. here.

### Late Mammoth

One of the finest varieties for main crop. Good quality, very productive. Desired for the home garden, but the husk is too thin for the market. (Pkt. 10c) (lb. 40c) prepaid; (10 lbs. \$2.50) f. o. b. here.

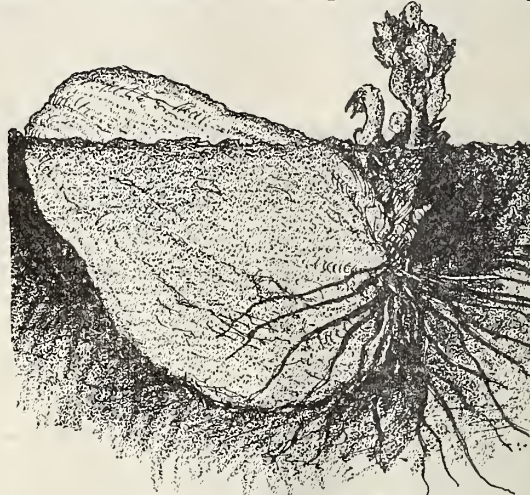
### Black Mexican

One of the best sweet corns for this section. Deliciously sweet and tender and very productive. (Pkt. 10c) (lb. 40c) prepaid; (10 lbs. \$2.50) f. o. b. here.

## A & M Chayote

The Chayote is no longer an experiment. It has now become an article of commerce. It may be found on sale at every grocery store throughout the season, which lasts from October until March.

The vine is a rampant grower. The first year from seed it will grow twenty to thirty feet. Destroyed to the ground by frost, it soon sends out new growth, and during the



Chayote as It Should Be Planted

second season will extend vines forty or fifty feet in every direction. During September it starts blooming, having a small white insignificant flower. Within four weeks the fruit is large enough for the table. One vine in two years if properly trellised will produce more than one thousand fruit.

**Cultural Directions** One fruit envelopes one seed, which sprouts from the large end. Plant where you intend it shall grow. Cover only the large end, leaving the small end exposed. (See picture.) Or let the fruit lie around until it has well sprouted, and then plant the seed, leaving the sprout well above ground. Water freely and do not be alarmed if frost should destroy it. A new shoot will soon appear. Give it abundance of water throughout the hot summer season.

Because of many complaints of failure to get them started we offer them already rooted. Seeds (30c each or 2 for 50c postpaid) (not rooted, 20c each or 2 for 35c postpaid). At the store (rooted 15c) (not rooted 10c).

**Receipts** Parboil, chop and casserole with tomato, onion and green peppers.

Fry as egg plant. Prepare as sumemr squash.

Use small ones, without peeling, boil until tender, cut in half, put a small lump of butter, a little sugar, salt and pepper on each one. Put in oven a few minutes.

For larger ones. Peel and cut into cubes and boil; when done, drain, add butter and seasoning and fry in pan. Let simmer until butter burns. Just before serving put tablespoonful of vinegar on them.

Parboil young ones and serve as salad with mayonnaise dressing or with boiled dinner as turnips.

**Spanish Style:** Can be cooked Spanish with tomatoes and chili or bake in roasting pan with meat.

**Breaded:** Also to boil until tender, slice, dip in egg and cracker crumbs and fry it.



The Vine-covered Cottage that Yielded \$30.00 Worth of Chayotes



# A & M Cucumbers

Carloads of them grown under muslin.

**Markets:**—The hot-bed cucumber is here to stay because it is profitable. There is usually an over-production in mid-summer when the price drops to 15c per lug which should never sell for less than 30c to be profitable. Probably more money is realized from Cucumbers planted September 1st than from the main crop planted earlier. Since the shipper has taken hold of the hot-bed cucumber the business has grown enormously.

Just think! 1,000,000 yards of muslin means 500,000 square feet of cold frame. All Klondike cucumbers planted within an area of a square mile, 350 carloads, shipped to Eastern markets during the months of April and May.

**Culture for cold frame**—Make the frame 4½ feet wide and as long as is desired, using 12 in. boards. Select a place with good loamy soil on a sunny slope. Mix the soil almost half and half with horse manure. About February 1st sow liberally with seed, in hills three feet apart each way. Stretch wire across the frame across and lengthwise. Sew muslin in widths and lengths to cover frame. Arrange to roll the muslin on a stick as a curtain. Cover each evening, and open each day.

**Field culture**—Plant from March to October in hills 4 to 6 feet each way, 8 to 10 seeds to a hill. Cover an inch deep. When danger of insects is past, thin out the plants, leaving 5 or 6 of the strongest in each hill. It is ready for the table in six weeks from planting seed. One ounce of seed will plant 40 hills; two pounds to the acre.

**Klondike** This cucumber has steadily grown into favor since we first offered it six years ago. It is the one variety that made carload shipments possible because it is firm, dark green color, and stays green until consumed; turns neither white nor yellow with age, but stays green. It is a desirable size, just 7 to 8 inches long, symmetrical in shape, and especially crisp and palatable. It is an excellent variety for pickling when young, as well as desirable for the market. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (lb. \$1.50) 5 lbs. \$5.75) postpaid.

**Davis Perfection** This is the ideal cucumber. Long slender, dark green, tender and crisp. It is the best all around cucumber yet offered for the family garden, the market garden and the hot house. Do not hesitate to plant this variety, whether you plant a dozen hills or a larger acreage. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) 5 lbs. \$7.50) postpaid.



**THE PROPER WAY TO GROW CUCUMBERS**  
Make ridges four feet wide, plant three feet apart on each side of the ridge. Irrigate between the ridges.

How to Plant. See page 39.



**Davis Perfection**



**Klondike**

**Arlington White Spine** This has been a favorite for many years; it is one of the best sorts for early out-door forcing, and always a good table variety. It is very prolific, and excellent for pickling when young. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.

**Improved Long Green** Dark green, firm and crisp; favorite with home and market gardeners. Hotel trade like a long cucumber for slicing; this is ideal for such purpose. It is very prolific, and none better for pickling. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 75c) (lb. \$1.50) postpaid.

**Japanese Climbing Cucumber** This variety should be grown more extensively; it is equal to others in quality and can be grown more economically in a small garden by planting near a fence or trellis of any kind, and climbs by tendrils as a grape vine. Whether space is a factor or not, we recommend it. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) postpaid.

We not only test our seeds for vitality, but we grow our leading vegetables to maturity to know they are true to name.



## A &amp; M CUCUMBERS---(Continued)

**Our Everbearing Cucumber** This variety is entirely distinct from all others on account of its close, bushy growth and everbearing character as shown in our illustration. The first cucumbers are ready very early and the vines continue to flower and produce fruit continually until late in the season, whether the ripe cucumbers are picked off or not, differing in this respect from all other varieties of cucumbers in cultivation. A single vine will show at the same time cucumbers in every stage of growth, the smaller ones being perfect in shape, of a fine green color, just the right size for pickling. As they grow larger they are entirely satisfactory as a slicing cucumber.

We recommend this to be planted in home gardens at all times, but especially in September. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (lb. \$1.50) postpaid.



A Single Plant of Our Everbearing Cucumber

**Chicago Pickling** This is the variety that is being shipped out of Orange County to the Los Angeles pickling factories. Thirty-five carloads were shipped in, and possibly as many more came by auto truck. Our seed has given these growers satisfactory results for years.

This variety is chosen because of its delicious quality and its shape, being one inch thick and three inches long when at pickling size. It is enormously prolific, bearing in clusters. We can recommend it for the home garden, but not for the market gardener, because it turns yellow soon after being taken from the vine. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 60c) (lb. \$1.25) 5 lbs. \$5.00) postpaid.

**Italian Cucumber** Always the prize-winner. Almost every county represented at the Exhibition in San Francisco had one or more jars of this Italian Cucumber. It is excellent for the table when quite young, and under ten inches long. It frequently grows to thirty inches in length. Sold only in packets, 10c each.

### A Word About Cucumbers

Planted from September 1st to 15th, in a sheltered place, will produce delicious cucumbers all through December and late into January. This has been done frequently, but so much depends upon the changeable climatic conditions each season that there is always a risk of failure, but it is worth a trial because the expense is small compared with the profit if you succeed. Six hundred dollars from one acre of cucumbers during the month of December is easily possible.

To prolong the vitality of your vines, pick all of marketable size every other day, and do not tread upon the vines when picking. To grow prize cucumbers, mix a handful of Fertilizer with the soil about the hill when planting, and more as the vine grows.

### HINTS AND SUGGESTIONS

During the years just past, more than one thousand inquiries have come to us. No two required precisely the same answer, because no two inquiries expressed the same conditions.

We have endeavored in this catalog to give information that would apply to almost every condition presented to us during the year, but when you cannot find the answer to your particular case, write us about it.

**We want you to excel in your line.** You can excel if you use A. & M. SEEDS and follow instructions given in this book. If you have but a city lot with a cottage upon it, you can within six months make the place a cozy home with flowers for beauty, and vegetables and berries sufficient to supply the table for the average family.

**If you have one acre of ground,** you can supply the table and sell enough to pay the grocery bill each month. One man with a little aid from his family can farm as much as one acre along with his daily work, and enjoy the healthful recreation.

### FIVE ACRES AND INDEPENDENCE

**If you have five acres of good soil,** and if you are an experienced gardener, you can make better than wages on your five acres if you will follow instructions in this book, so that you will plant the right variety at the right time. When mature, put up in clean, attractive shape, and build up a market by giving regular, dependable service.

**If you have fifty acres of good garden soil near a city,** be a gardener for the city market, and grow every variety of vegetables.

**If you have one hundred acres of good garden soil,** grow by contract for the canner, or grow at the right season the things the shippers want, and grow carloads of them.

**Gherkin** This cucumber is used only when pickled, but it is the most delicious of all the cucumber family when properly pickled. It should be more extensively grown. Planted where it may climb on a trellis, one vine will cover a section of fence eight feet high and twelve feet wide, producing possibly a thousand or more of the delicious and oddly shaped gherkins. It should be planted to shade a window or back porch. Pkt. 5c.



SMALL GHERKIN.

**Lemon Cucumber** At last after years of advertising and effort to educate the home-gardener to grow the Lemon Cucumber in preference to the common long green type, we can now say that at least half the people are awake to the superiority of this delicious salad, and the other half will soon regret not having tried it earlier. Every one who has tried it is unanimous in its praise and would not think of omitting it from the spring garden. It is the color of a lemon when ready to use, and similar in shape, being less pointed at the ends. Plant four or five hills for a family garden. Cultivate same as other cucumbers, water freely and you will have four times as many cucumbers as any other variety will produce.

There is nothing but praise for the Lemon Cucumber. It may now be found at almost any vegetable stand, and no home garden should be without it. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

When you have tasted the Lemon Cucumber write us about it that others may know how good it is.



Lemon Cucumber

READ READ READ READ

Where you see the word "Read" do not fail to read. It is a sign that what follows may be of much interest to you—calling attention to some further information which should not be overlooked.

**READ AND STUDY YOUR SEED CATALOG:** The average person when looking through a seed catalog as they do a time-table; merely look for the lines in which they are interested, then discard it. To discard your seed catalog without first reading every page you fail to get the benefit for which the catalog is intended.

This seed catalog is intended to instruct all classes, from the beginner to the graduate. Read about farm bulletins on page 7.



## A & M Chicory

### Large Rooted

The roots, dug in the fall, dried, cut in thin slices, and ground, are used largely as a substitute for coffee. Seed should be sown quite thinly in shallow drills early in the spring. When well started, thin out to stand two or three inches apart in the row, and give good cultivation all summer. (Pkt. 5c) (oz. 40c) (¼ lb. \$1.25) (lb. \$4.00) postpaid.



WITLOOF CHICORY.

### Witloof Chicory

Sow the seed in deeply prepared ground during June, July and August. Thin out to eight inches apart in rows twelve inches apart. In the fall take up the roots and store them in a manner that will preserve them in good shape for a month or longer. This can be done by burying them in sand. In December make trenches ten inches deep and twelve or fifteen inches wide, and loosen the soil for ten or twelve inches deeper. Set the roots three inches apart in rows six inches apart, within the trench, so the tops of the roots are eight inches below the top of the trench. Then fill with sand, water thoroughly and cover with manure. In two to four weeks tender heads will form and be ready to use as a salad with French dressing.

This is a most delicious salad, and many Eastern growers are making a specialty of it, selling to hotels at fancy prices. We suggest it to our many mushroom growers, believing it will go nicely hand-in-hand with the growing and marketing of mushrooms. (Pkt. 10c) (oz. 20c) (¼ lb. \$1.25) (½ lb. \$2.00) (lb. \$4.00) postpaid.

## A & M Collards

The Collard is an old-time favorite, adapted to all parts of the South, and as a producer of "greens" for boiling in winter and spring it has no equal. It will pay you to have a collard patch just to feed the chickens.

**Southern Georgia** This variety is the old-time favorite. Stands all sorts of adverse conditions without injury. Is very hardy. In many places where the soil is too poor to grow cabbage, the collard grows easily and makes a good substitute for cabbage. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (lb. \$2.00) postpaid.

## A & M Cress

**Pepper Grass** Sow curled or pepper grass thickly, in shallow drills, every two or three weeks. It should be cut often, and will continue to grow. It is used not only for salad, but on the breakfast table and for garnishing. Used with lettuce its pungency adds an agreeable flavor. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) postpaid.

**True Water Cress** Should be sown in damp soil or if a stream of water can be utilized, it would be much better. It will also thrive well in damp cold frames. Rightly managed, its culture is very profitable. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) postpaid.

## A & M Corn Salad

**Culture**—Sow any time from Oct. 1st until February. Plant and cultivate the same as lettuce. It is hardy in this climate. It is used for garnishing in the same manner as parsley or cress. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (lb. \$2.25) postpaid.

**CHERVIL** Pkt. 5c.

## A & M Dandelions

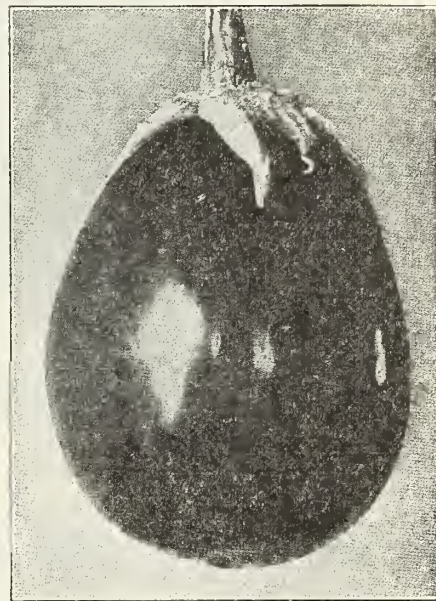
Sow early in spring, in very warm, rich soil, in drills eighteen inches apart; thin to five inches apart and cultivate well; they will be fit for cutting the next spring. When grown for the roots, sow in September and cultivate well during the fall and the following summer; the roots will be fit to dig in October.

**Improved Thick Leaved** Unsurpassed in thickness of leaf and deep green color. It is compact and forms an upright regular tuft at the center. This cabbage-like sort is much superior to the common or uncultivated dandelion. Pkt. 5c.

## A & M Egg Plant

**Market**—The sale of Egg Plant does not compare favorably with other produce, and the consumption is not large. It is owing to the productiveness of the Egg Plant which makes it at all profitable during the season of abundance. A small acreage yields enormously, but it is the very early Egg Plant which makes a profit, such as \$1000.00 per acre May and June are considered early.

**Culture**—The seed should be sown in a hot-bed during December or January; it is slow to germinate and requires warm and even temperature. The plants should be ready to set out by April 1st, and may be planted as late as August 1st. Plant eighteen inches apart. Keep well watered, and pick closely as soon as large enough. In very warm protected spots they will survive the winter. Even if the foliage is destroyed sprouts may appear the following spring from the stem beneath the soil and mature marketable fruit the following May. Egg Plants require four to six months to mature. One-fourth pound of seed is sufficient to plant an acre.



New York Improved Spineless Egg Plant

**Plants**—New York Spineless, from April 1st to Sept. 1st, per dozen 75c; per hundred, \$4.00; at the store only.

**New York Improved** This variety has superseded all others, both for market and home use. The large size and high quality of its fruit and its extreme productiveness make it the most profitable for the market gardener. It is spineless, which is a great advantage in shipping. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.50) (½ lb. \$4.00) (lb. \$7.50) postpaid.

### The Tree Egg Plant



This variety is of medium size and extremely good shape, being particularly adapted to slicing, as there is no waste of material. It resists drought and bad weather to a wonderful degree, partly on account of its strong, upright growth. It bears its fruit sometimes one or two feet above the ground, thus escaping liability to rot. It is very satisfactory for the home garden. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.50) (½ lb. \$4.00) (lb. \$7.50) postpaid.

### Black Beauty

Is preferred by growers for the early market because it matures marketable sized fruit earlier than any other variety, and because the fruit is dark colored, when quite young and uniformly over the entire surface. It is entirely free from spines. It is popular because it is a money-getter. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.50) (½ lb. \$4.00) (lb. \$7.50) postpaid.

Tree Egg Plant

formly over the entire surface. It is entirely free from spines. It is popular because it is a money-getter. (Pkt. 10c) (oz. 80c) (¼ lb. \$2.50) (½ lb. \$4.00) (lb. \$7.50) postpaid.



## A & M Endive

Culture—Same as for lettuce. Seed may be sown any time during the year. When plants are well started, thin out to ten inches apart, or they may be transplanted. When plants have reached a good size, gather the leaves closely together and tie loosely in an upright bunch. This blanches the inner leaves in about ten days and adds to the crispness as a salad, as it renders the flavor mild and delicate. One ounce will sow 100 feet of row.



Green Curled Endive

This plant furnishes an attractive and appetizing salad for the fall and winter months, or by repeated sowings a supply may be had nearly all the year round.

**Green Curled** Leaves are finely cut or lacinated, giving the plant a rich, mossy appearance, which is greatly enhanced when the centers are nicely blanched.

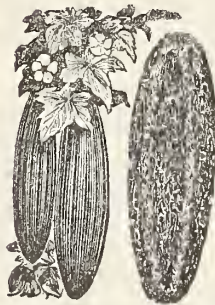
This is the variety generally preferred because it blanches to a beautiful golden yellow. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

**White Curled** This beautiful variety does not need blanching to prepare it for use, the midribs being naturally of a pale golden yellow, the finely cut and curled leaves are almost white. (Pkt. 5c) (oz. 15c) (¼ lb. 65c) (½ lb. \$1.00) (lb. \$2.00) postpaid.

**Batavian or Escarol** Forms large heads of broad, thick leaves, which can be blanched for a salad or it will make excellent cooked greens, as well as being useful to flavor soups, stews, etc. (Pkt. 5c) (oz. 15c) (¼ lb. 65c) (½ lb. \$1.00) (lb. \$2.00) postpaid.

## A & M Gourds

Culture—Gourds are tender annuals, of trailing or climbing habit. The seed should not be planted until the ground is warm. Plant in hills and cultivate as cucumbers. Leave only three or four plants in a hill, and allow the vines to ramble or train over a trellis and for shading windows.



Dish Rag Gourd

**Dish Rag Gourd** The peculiar lining of this valuable gourd gives it its name. The fruit grows about two feet long. The interior fibre is serviceable for a variety of household purposes, being used as a dish cloth, or sponge. The fibre is tough, elastic and durable. (Pkt. 10c).

**Orange or Mock Orange**

A good old sort, the fruit often finding its way into the family sewing basket. A beautiful and rapid climber, quickly covering trellises. (Pkt. 5c) (oz. 15c).

**Dipper** A well known and useful gourd. When grown on the ground the stem is much curved; but on a trellis the weight of the fruit makes the stem straight. This gourd is very much in demand. (Pkt. 10c).

**Nest Egg** Pkt. 5c.

**Ornamental** Small, odd shapes and colors. Pkt. 10c.

**Mixed Gourds** Pkt. 5c.

**Sugar Trough** Large bowl shaped; used extensively by the native Hawaiians for culinary purposes. Pkt. 10c.

**South African Pipe Gourd** When not trellised they grow with a uniform curved neck forming a pipe shaped gourd that colors like a meerschaum and is as useful. Pkt. 10c.

Bottle Gourd—Pkt. 10c.



Bottle Gourd

## A & M Herbs

**Plant Dill** Last year there was such a demand for green dill that the supply was much short of the demand.

Plant in any quantity, from ten feet square to one acre but not more. Make several plantings to have it drag along and sell what you can of the green dill and let the balance mature for seed. There is a good demand for the seed at about 20c per lb.

Herbs in general, delight in a rich, mellow soil. Sow the seed any time throughout the year, in shallow drills one foot apart; cover lightly with fine soil, and when up a few inches, thin out to proper distances apart, or transplant into prepared beds. Care should be taken to harvest properly do this on a dry day, just before they come into full blossom. Dry quickly in the shade, pack closely in bottles or dry boxes to exclude the air; this will insure their being preserved in good condition for future use. Varieties in the list marked \* are perennials.

### Other Leading Varieties

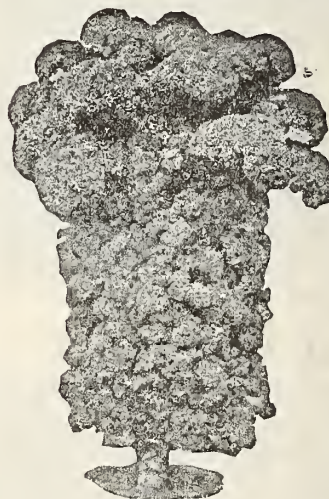
Pkt.	Oz.	Pkt.	Oz.
Anise .....	5c 10c	*Lavender, Sweet..	5c 20c
Balm .....	5c 10c	*Peppermint .....	10c
Borage .....	5c 10c	*Rosemary .....	5c 25c
Burnet .....	5c 10c	*Sage .....	5c 10c
*Caraway, lb. 50c.	5c 10c	Saffron .....	5c 10c
*Catnip or Catmint	5c 10c	Summer Savory..	5c 10c
Chervil .....	5c 10c	Sweet Marjoram..	5c 10c
Coriander, lb. 50c.	5c 10c	Sweet Basil .....	5c 10c
Dandelion .....	5c 10c	*Thyme .....	5c 50c
Dill .....	5c 10c	*Winter Savory ..	5c 15c
*Fennel, Sweet ..	5c 10c	*Wormwood .....	5c

The supply of Culinary plants and herbs has not held up with the demand. There is room for a specialist in this line. See wholesale druggist and butcher supply dealers.

Devote a small plot in your garden to the growing of herbs. They add to the taste of things what daintiness adds to the looks of things, and many of them may be enjoyed all the year round.

## A & M Kale

Culture—Seed should be sown thinly, in drills about the middle of June for the tall sorts; transplant the young plants twelve inches apart in rows three feet apart. Later in the season the dwarf sorts may be sown rather thickly in drills to furnish small heads to be cooked like spinach. One ounce to 100 feet of drill.



Tall Kale

**Dwarf German Kale**

German Green or Sprouts The leaves are curly, bright, green, very tender and delicate flavor. (Pkt. 5c) (oz. 25c) (¼ lb. 80c) (½ lb. \$1.25) (lb. \$2.50) postpaid.

**Tall Scotch**

This makes a beautiful plant, about two-and-a-half feet tall. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. 65c) (lb. \$2.25) postpaid.

**Jersey Kale** A tall variety with smooth leaves. Especially used for poultry greens. (Pkt. 5c) (oz. 15c)

(¼ lb. 40c) (½ lb. 65c) (lb. \$1.25) postpaid.  
**Thousand Headed Kale** Excellent for the table and for poultry green (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 65c) (lb. \$1.25) postpaid.

## A & M Kohl Rabi

Culture—Seed may be sown every month in the year. Drill on ridges same as beets. (See page 5.) Thin to three inches apart. An ounce of seed will produce 2,000 plants.

**Early White Vienna**

The earliest sort, very tender, excellent for table use. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.50) (lb. \$3.00) postpaid.

**Early Purple Vienna**

Similar to above, but has flesh of purple color. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.50) (lb. \$3.00) postpaid.



Kohl Rabi



# A & M Lettuce



Los Angeles Market or New York

## How to Raise Lettuce—See Page 27

In the bulletin, "Lettuce Growing in California," by Stanley S. Rogers, published by the University of California, we note that Prof. Rogers predicts great development of the lettuce industry, since so heavy a demand for California-grown lettuce is growing up that it is often difficult to supply the Eastern demand. Last year more than 2000 acres were planted to lettuce in California.

Experienced growers under favorable conditions can produce 2000 dozen heads per acre, and at an average price of 12½ cents per dozen, this means, for skillful farmers on good land, a gross income of \$250 an acre and a net income of \$176.80, with the land in use for lettuce only three or four months.

Lettuce is very exacting as to soil requirements. It is best suited to a rich, light loam, and should never be planted on soils of poor quality. Irrigation is necessary throughout the entire growing period, except during the rainy season, but the crop is easily ruined by an excess of water. The crop stands cold better than heat, and in many of the interior valleys of the state it is impossible to raise lettuce of good quality during the summer.

At the time of planting, the soil should be in the finest possible condition. Many growers apply from 15 to 25 tons of manure per acre. The plants should be grown on ridges, 12 to 18 inches wide, four to six inches high, and ten to 15 inches apart. The water should be run between the ridges and not flow over the tops, and should never be allowed to cover the plants. There should always be an adequate amount of moisture in the soil from the time the plants have commenced to head until they have matured. The hoeings necessary on raised beds will vary from one to five. The earth around the plants should not be allowed to harden.

In the interior valleys and especially in Central California, plants set in the field during September should mature during December. In warm weather the lettuce should be cut early in the morning and never when the heads are wet, as in that condition they will heat and quickly rot. The field is gone over from two to five times during the cutting season.

At the university farm vegetable garden, 80 different varieties of lettuce were grown during the past season, and most of them did well. However, now most in favor in California are the Los Angeles or New York Market, which is best adapted for long distance shipments and which withstands cold weather injury but is not adapted to maturing during hot weather.

The chief difficulties the lettuce grower meets are lack of a satisfactory stand, due to unfavorable weather, seed of poor germinating power, or to over-irrigation or under-irrigation; or diseases, such as "stem rot," a fungus disease controllable by good drainage, and "sunburn," a blackening of the edges of the leaves inside the heads, caused by a period of excessively hot weather from the time the plants are half grown until they have commenced to head, and preventable by planting in the fall or early spring and by frequent irrigation during the spring if the weather is very hot and dry.

Lettuce is usually shipped in the pony lettuce crate, which weighs 66 pounds gross. About 310 crates are loaded per car. The average is given at 4½ to five dozen heads from Los Angeles County; 3½ to five dozen heads from Imperial Valley.

### WHY IS IMPERIAL LETTUCE LARGER?

Probably because they allow it to mature to good size. Los Angeles growers are too impatient to fill orders, and this impatience is costing them one-fourth of their crop. This temptation to sell before the crops mature too often robs the grower of his profit. Remember almost all crops nearly double their tonnage the last two weeks of growth.



Big Boston

## Los Angeles Market or New York Special

**One of Aggeler & Musser Seed Co.'s Big Money-Makers.** This is one of the many vegetables introduced by us which have become of great value to the growers of Southern California. Like the Pearl Cauliflower, Winnigstadt Cabbage, and Golden Self Blanching Celery, thousands of carloads of this lettuce are being shipped from Southern California, Phoenix, Ariz., and many carloads from Southern Texas. This is surprising when only a few years ago we were requested by one shipper to get a lettuce that would stand shipping better than the smooth leaved varieties. We experimented with a curled variety and developed this hard headed type that weighs more than two pounds per head. We shipped the first crate to a friend near Philadelphia, Pa. It arrived in perfect condition and kept good on ice for a period of three weeks, until consumed. We then introduced this as the Los Angeles Market lettuce. It at once created a sensation with the growers, and later with the shippers, when they learned it would carry to the far east as well as cabbage. It is now shipped more extensively than any other vegetable.

This Los Angeles Market lettuce was later offered by other seedsmen in other parts under other names, such as **Wonderful** and **New York**, but as it was introduced from here and grows to perfection around Los Angeles during the winter months, the name **Los Angeles Lettuce** is aptly applied to it by dealers and consumers everywhere in the United States. (Pkg. 5c) (oz. 20c) (¼ lb. 70c) (½ lb. \$1.10) (lb. \$2.00) postpaid.

**Read:—STANDLEE BROTHERS, at Brawley, Calif.,** planted fifty acres to our Los Angeles Market. The first planting yielded 22 cars of 304 crates each, 3½ dozen to the crate and sold at \$3.00 per crate. They shipped 54 cars from 5½ acres. The December planting was blighted during April. Therefore, we advise planting during September and October to obtain the best results in Imperial Valley.

**Iceberg** This is next to Los Angeles Market as the leading variety for the Southwest during the summer months. Of course it is better during the winter months, but not so solid as the Los Angeles Market, which is strictly a winter variety, while the Iceberg is a good all-season lettuce, and hundreds of carloads of Iceberg are being shipped when the other is not available. Iceberg lettuce planted later than March 1st should be grown on dark, heavy soil, because if grown on light, sandy soil the heat of the sun reflected from the sand on the under side of the leaves causes them to burn almost to the heart.

The light green, curled, red-tinged leaves of the Iceberg form heads as large as the Los Angeles Market, but not so solid, but it is as tender and crisp, and is of excellent flavor. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) (5 lbs. \$8.00) postpaid.

**Big Boston** Very large, smooth-leaved, solid-heading variety; grown more extensively throughout the east and south than any other. It is congenial to all climates, and is a good shipper. In flavor it probably excels all other smooth-leaved varieties. An excellent all year round lettuce. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) (5 lbs. \$6.25) postpaid.



## LETTUCE—(Continued)

**Hanson** Without exception this is the best variety for late spring and mid-summer crop. Prof. F. W. Mally, Farm Demonstrator of Webb County, Texas, discovered Hansen Lettuce to be resistant to both heat and disease and particularly resistant to eel worm which is often prevalent where least expected. Hansen Lettuce is similar to the Iceberg Lettuce, except that it has not the tinge of red. We recommend it for the home garden. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) (5 lbs. \$6.00) Postpaid.

**May King**

Very similar to Big Boston, without the tinge of red. It is a good shipper and of excellent flavor. (Pkt. 5c) (oz. 10c) (¼ lb. 40c) (lb. \$1.25) postpaid.

**Way-a-head**

A large solid-headed smooth-leaved type. All green, none of the red tinge that is so much objected to on the part of the shipper and the retailer because the red tinge suggests staleness which the buyer would avoid. When you plant the Way-a-head you will have the best smooth-leaved variety on the market. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50).

**Paris White Cos** Upright, crisp and tender. Cos lettuce is becoming deservedly popular, and should receive more attention from market gardeners. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) (5 lbs. \$6.00) postpaid.



Paris White Cos

**Marblehead** A lettuce of great favor in the East because of its delightful flavor, and because it there grows to perfection from early spring until late fall. For the Southwest it is our best summer lettuce, but like all other varieties with us, it attains its perfection during our winter months. Plant all the year round. (Pkt. 5c) (oz. 15c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

**Early Curled Simpson** This is a very popular variety as a loose leaf lettuce. The leaves are large, thin, very tender and of very good quality. (Pkt. 5c) (oz. 10c) (¼ lb. 40c) (½ lbs. 70c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**California Cream Butter** This lettuce is similar to the Big Boston. Is a good shipping variety. One gardener sold from one-half acre of this lettuce nearly three hundred dollars' worth. It is of good flavor and beautiful in appearance. (Pkt. 5c) (oz. 10c) (¼ lb. 40c) (½ lb. 70c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**Tennis Ball** Similar to the California Cream Butter, except in size and without the tinge of red. It forms a solid head and is best for early spring. (Pkt. 5c) (oz. 10c) (¼ lb. 40c) (½ lb. 70c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**A & M LEEK**

**A & M Leek** We believe in having the best of everything. With this idea always before us, we have secured this fancy strain of leek. It is large, white, tender and mild—the best in the world. Its mild, delicate flavor makes a delightful addition to lettuce salad. (Pkt. 5c) (oz. 30c) (¼ lb. \$1.00) (½ lb. \$1.75) (lb. \$3.00) postpaid.

**A & M Mustard****Common Wild**

(Pkt. 5c) (oz. 10c) (lb. 40c) postpaid.

**White** Better for salad or culinary purposes. (Pkt. 5c) (oz. 15c) (lb. 50c) postpaid.

**Southern Giant Curled**

The true curled-leaf variety so popular in the South for planting in the fall. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (lb. \$1.25) postpaid.

**Ostrich Plume Mustard**

Is delicious as well as ornamental; the leaves resemble ostrich plumes, hence the name. (Pkt. 5c) (oz. 20c) (lb. \$1.50) postpaid.



Chinese White Mustard

**Chinese White Mustard**

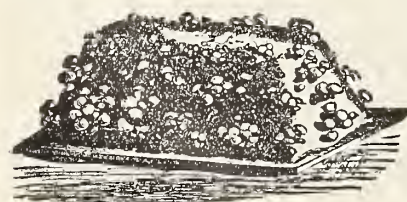
This is a delicious vegetable and flavors strongly of Brussels Sprouts, being less pungent than the American varieties. It is greatly relished by the Orientals, and can be seen all the year round at vegetable stands kept by the Japanese and Chinese. (Pkt. 10c) (oz. 25c) (¼ lb. \$1.00) (½ lb. \$1.50) (lb. \$3.00) postpaid.

**Chinese Green Mustard**

This is an Oriental vegetable, and like the White Mustard, is grown all the year round, but like our American Spinach, thrives best in the winter season. (Pkt. 10c) (oz. 45c) (¼ lb. \$1.35) (½ lb. \$2.25) (lb. \$4.00) postpaid.



Chinese Green Mustard

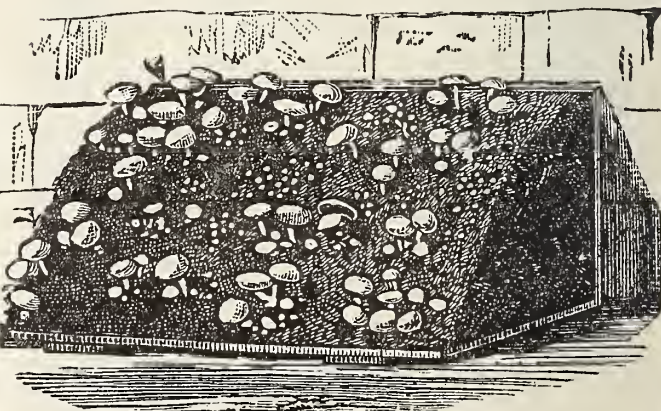
**A & M Mushrooms**

Mushrooms

One of the most profitable crops for the outlay that can be grown. The market is sure, because the supply never equals the demand. Mushrooms can be grown in any dark room or cellar where the temperature can be kept at 50 to 75 degrees. The main conditions in mushroom growing are proper and uniform temperature

and very rich soil. One pound of spawn is sufficient for a bed 2x8 feet. We have the very best spawn obtainable. If interested, write for circular.

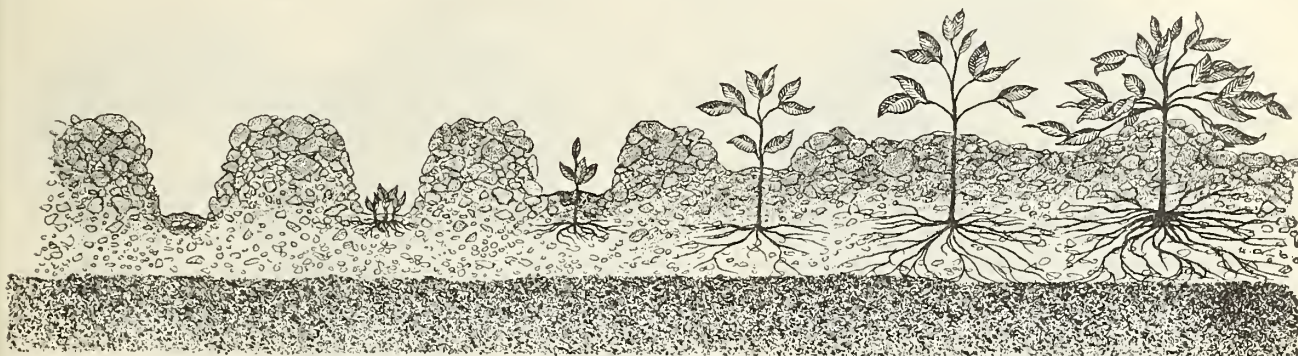
**Pure Culture Spawn—Brandywine—Put up in bricks.** Per brick, 25c; by mail, 40c.





Read this page carefully; it may prove of much value.

## Deep Planting for Dry Farming to Insure a Healthy Growth



Planting

Second Week

Third Week

Fifth Week

Seventh Week

Last Cultivation

### READ CAREFULLY (STUDY PICTURE)

Pulverize the soil thoroughly 10 inches or deeper. Make your furrows deep; plant the seed in the bottom of the furrow, and cover one inch deep for vine seeds and two inches for potatoes. In one week the sprout should be above the ground and the plant well rooted. In two or three weeks the vines will be beyond danger from the beetle and should be thinned leaving two plants and the earth drawn toward the plant until it is about level. In four or five weeks, with plow or cultivator, throw the earth around the plant until the soil is hilled up about the plant and the root system is ten or twelve inches below the surface, but bear in mind that the little feeders come to the surface, and after five or six weeks, cultivation should not be more than two inches deep.

This cut shows the method of planting when dry farming is intended. If available, irrigation will be beneficial. If this method is followed, there will be little danger from blight and the vines will be healthy enough to resist other diseases.

**Remember**—Apply this method also when transplanting Tomatoes, Cabbage, Cauliflower and almost anything but Sweet Potatoes.

### Important Information on Culture

A good rule for planting and irrigating melons, squash, pumpkins, cucumbers and tomato plants.

The soil must be thoroughly soaked two or three feet deep, either by rain or irrigation. When dry enough spade or plow ten or twelve inches down. Thoroughly pulverize the soil. Make furrows eight or ten inches deep.

Plant the seed in the furrow at regular distances apart, four feet for cucumbers and bush squash, six feet for muskmelons, eight feet for casabas, and ten feet for watermelons, pumpkins and vining squash.

As the plant grows gather the soil around it until the roots are twelve inches or more below the surface. Thin out all surplus plants as soon as they are hardy and well established. The rows are now straight and an equal distance apart. This makes it easy to cultivate close to the hills, both lengthwise and crosswise. Cultivate deeply as long as there is no danger of disturbing the roots. Be always mindful that the roots are as long as the vine, therefore, when working close to the hills and among the vines, let the hoeing or cultivating be shallow.

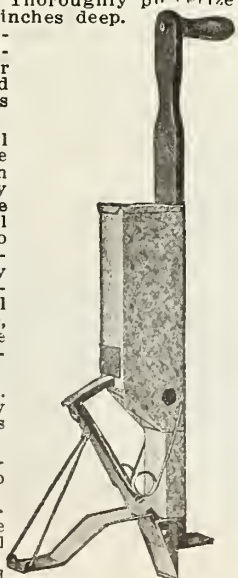
Do not irrigate close about the hill. Always make the irrigation furrow nearly as far from the hill as the tips of the vines.

Always cultivate the irrigation furrow as soon as it is dry enough to mulch nicely.

Heavy soil or loam requires less frequent irrigation than sandy soil. The term irrigation means soaking the soil thoroughly, not lightly.

If this rule is intelligently adhered to your vines will never suffer from drouth, or root blight, and will be healthier in every way, because the roots are deep down in the cool, moist earth unaffected by the heat of the sun. This is the secret of success with all midsummer planting.

This method also applies to the transplanting of tomatoes.



Segment Corn Planter. All large melon growers are now using the Segment Corn Planter—it does the work better. Price \$1.50 f. o. b. here. Wt. 5 lbs.

## FOR ALL KINDS OF MELONS

### Common Sense Talk About Protection Against Insects

There is just one sure remedy. Don't wait until you discover the little cucumber beetle at work and having destroyed half your field, and then wire to your dealer to send something—just anything to destroy the beetle and save your vines; then spend days spraying and replanting to repair what damage has been done. You never can regain the time lost—the time that is so valuable to the early planter. At the time you plant your seed have pieces of wire 18 inches long cut from baling wire and pieces of cheese cloth 18 inches square—that is, four pieces to the square yard. Arch the wires at right angles over the seed, and make a tent with the cloth over the wires, covering the edges with earth. Then don't worry until the plants crowd the tent, after which remove the cloth but do not thin out the plants until after several days when they have become hardened by exposure. This method will cost about \$10.00 per acre, and less time than it requires to combat the beetle, but you save your plants. The cloth may be used several seasons.

Next to the above method is to spray the vines with Paris Green, using one heaping tablespoonful to four gallons of water and keep it well stirred, which is very important.

**FOR APHIS**—First keep the vines hardy by deep planting and proper cultivation, irrigation and fertilizers. Then if the aphid appears, which is unlikely, spray with Black Leaf 40, or bury the affected part with dust. Either way is a constant fight. Lady bugs in some instances are doing the work satisfactorily.

**FOR MELON BLIGHT** that is caused by a fungus at the root, spray the hill freely with Bordeaux so that the liquid will follow the stem several inches beneath the surface. This should be done as a precaution rather than as a remedy.

One grower reported to us that the melon wilt was destroying his vines. We advised him to apply a cup of Bordeaux to the stem of the plant at the surface of the ground, and soak it in until it was thoroughly applied. This is to destroy any fungus that may exist there. He did so and reported that it saved his field and some of the vines seem to have grown six inches during the first night. Try it.

**READ THIS.** If you would prolong the life of your vines, make a path between the rows by training the vines to grow along the rows, and not across from one row to the other. Then at picking time do not allow the pickers to tread upon the vines. To do so makes many culls and shortens the life of the vines and lessens your profit about one-third.

**A New Remedy to Combat the Beetle from Wm. E. Mc-Afee, Kentucky:**

"I note your preventive remedy for the Melon beetle. We have one here that is very simple, profitable and effective. When you plant your seed, set an onion set in each hill close to the point where the melon plant will come up. After the plant is out of danger you can market the onion if you so wish. I tried this remedy last year and saw but three bugs in my patch and these did no harm. I had the same experience with my cucumbers."

### READ

Mr. Butler of Lamanda Park says: "Last year I had Melon blight and tried your Bordeaux remedy with good results. This year I tried your deep planting method and had no blight."

### Bran Mash for Cut Worms

Paris Green 1 lb., lemons 3, molasses 2 qts., water 3½ gals., bran ½ bu. Mix bran and Paris Green dry; cut lemons into fine pieces. Mix all thoroughly. Or use Cut Worm Killer. See page on Insecticides.



# A & M Casabas

See Back Cover Page

(If interested write for our Casaba circular)

The casaba can be grown successfully throughout the Southwest.

The casaba is now at full zenith of popularity. Previously it was grown as a late melon to mature after the cantaloupe season. As a late melon its popularity was confined to a limited section near the Coast of Southern California. But it is now demonstrated that it can be grown in all semi-arid sections side by side with the early cantaloupes and watermelons. The carloads of large perfect casabas of the Winter Pineapple, Golden Beauty and Improved Hybrid types that were shipped from the Imperial Valley during the past two seasons, have proven the value of the casaba as an early melon and good shipper equal to the watermelon and cantaloupe. Casabas are shipped to Los Angeles and San Francisco without crating, as are watermelons.

Our prophecy made years ago is now fully realized. We then stated that casabas would be shipped to Eastern markets in carloads, becoming one of California's many commercial products of great value. Imperial and Los Angeles counties are most conspicuous as shipping centers. More than one thousand carloads were shipped from these points last season.

Grown in the Imperial Valley with early cantaloupes and watermelons, shipped without crating in the same car, it appears on the market the latter part of June and commands a much higher price per pound than watermelon. It at once finds as ready sale as other melons, and continues in unabated demand until after the New Year, when all other melons have long since disappeared from the market.

Cultivate the same as muskmelons. Plant according to your locality, from February 15th until July 15th; for late shipping June 1st to July 15th seems to be the best time for planting.

Casabas may be taken from the vine as soon as they lose the green luster, but should not be eaten until the hard rind of the Pineapple and Golden Beauty will give slightly under pressure, but the Hybrid is not at its best until the thumb can make an impression as in a mellow apple.

The best way to keep the casaba late into the fall is to gather them together on the hill and cover them completely with the vines, but do not pick them off the vine.

## Improved Hybrid

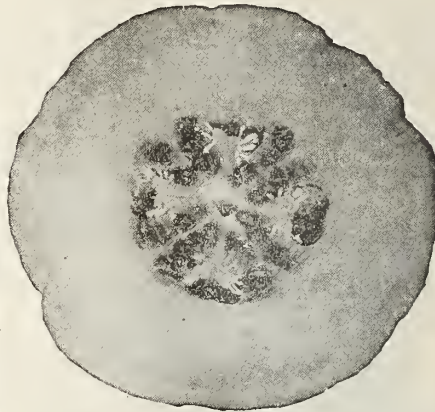
The melon that made Los Angeles famous. This melon is now grown as extensively for a mid-summer crop as the muskmelon, and finds as ready sale. It originated locally, and is as distinctly a Los Angeles product as is the Los Angeles Market Lettuce. Both have made Los Angeles famous. The local and traveling public are now fully awake to the delicious flavor of this casaba. For the home garden or for the market plant the Prince of All Casabas. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. \$1.60) (lb. \$2.50) postpaid.



The Prince of All Casabas  
Introduced by us in 1902

## A & M Hybrid

This is a cross between the Winter Pineapple and the Montreal Muskmelon. It grows to a very large size and is of delicious flavor. It is a rampant grower and yields enormously; as many as seventeen large melons were taken from one vine. It is profitable, early and late. Plant from March 1st until July 15th. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.



Note Small Seed Cavity

**Golden Hybrid** (See back cover) **ATTENTION GROWERS:**—We first offered this Casaba last spring. We were disappointed that so few of them appeared in the market last season. We give the melon our personal endorsement; it is as excellent as the Green Improved Hybrid, and its yellow color is in its favor for selling purposes. It will supersede the Green Winter Pineapple. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (lb. \$3.00).

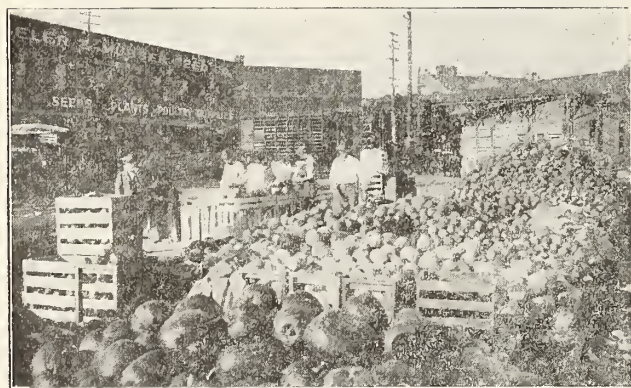
**Winter Pineapple** This is the first of casabas introduced into America. We have carefully maintained the purity of type so that it is now just as distinct as when introduced nearly forty years ago. This and the Golden Beauty are identical in all except color, which when mature is light green. The Winter Pineapple is more profitable as a late melon, therefore we recommend to growers near the Coast that it be planted during June. Our type of Winter Pineapple is round, selected for its good shipping qualities. (Pkt. 5c) (oz. 25c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.

## Santa Claus

The name is appropriate to the melon. It is a delightful present to send to your Eastern friends at Christmas. It is of delicious flavor, beautiful in its mottled gold and black coloring, and readily keeps until January. We advise that it be grown more extensively for the local trade. The supply has not been equal to the demand for several years. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. \$1.35) (lb. \$2.50) prepaid.



Santa Claus



Packing Golden Beauty Casabas for Carlot Shipment

In the foreground Jack o' Lantern Pumpkins. In the background Hubbard Squash.

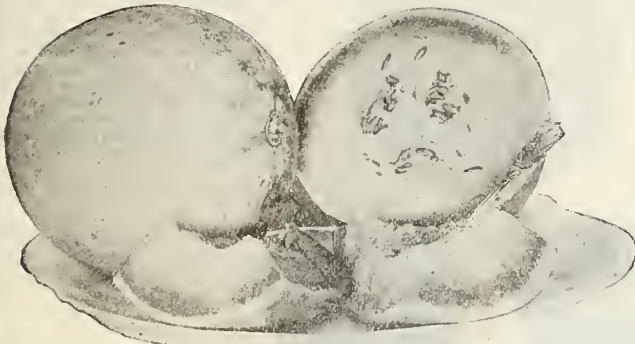
**Golden Beauty** Introduced by us in 1906, it at once became popular locally. It is now grown more extensively throughout California than any other casaba because of its beautiful appearance, excellent shipping qualities and delicious flavor. It is the casaba that added much to the fame of California, as well as adding a million dollars each year to the wealth of the state. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. \$1.35) (lb. \$2.50) postpaid.



## A &amp; M Casabas—(Continued)

## Honey Dew

The melon with an appropriate name



### Honey Dew

The melon with an appropriate name. See picture on cover page.

The Honey Dew again made good last season. It exceeded other melons in popularity on the local market and was profitable to the grower. It yields enormously, and every melon is a good one.

It is true the supply last season was in excess of the demand, but the Honey Dew proved to be all that is claimed for it.

It is ready to pull when the color shows the slightest tendency toward yellow, and ready to eat in a few days when it is slightly soft.

The picture on the cover is typical of its shape; the average size is about as large as a cocoanut, but the smaller sized melons are not inferior in flavor. Every melon is a good one. Flesh is light green and sweet as honey. The rind is light green or silvery-gray in color, smooth as an egg and hard as the rind of a winter squash. It is therefore a good shipper, and unlike the casaba, it is good right off the vine, and will keep good for months. This is in its favor for shipping.

As a local melon, it advertises itself. The first one eaten creates a desire for more. The peddler soon discovers his customers are asking for it. He must have it.

Plant it in your home garden. It will afford you more pleasure than any other vegetable you have. But don't plant it near cucumbers or casabas.

(Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.75) (lb. \$3.00) postpaid.



**Golden Honey Casaba** This is quite distinct from the other casabas, and you will believe it has some special merit not possessed by the others or we would not offer it. Its great merit is its good keeping, good shipping, good looking and good tasting qualities. It is round as a cannon ball, size of a cocoanut, yellow as an orange, hard and solid as a base ball. May be shipped to New York in November and served for breakfast at Christmas to the delight of the consumer.

Size 6 inches in diameter. Wt. 4 lbs. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.75) (lb. \$3.00) postpaid.

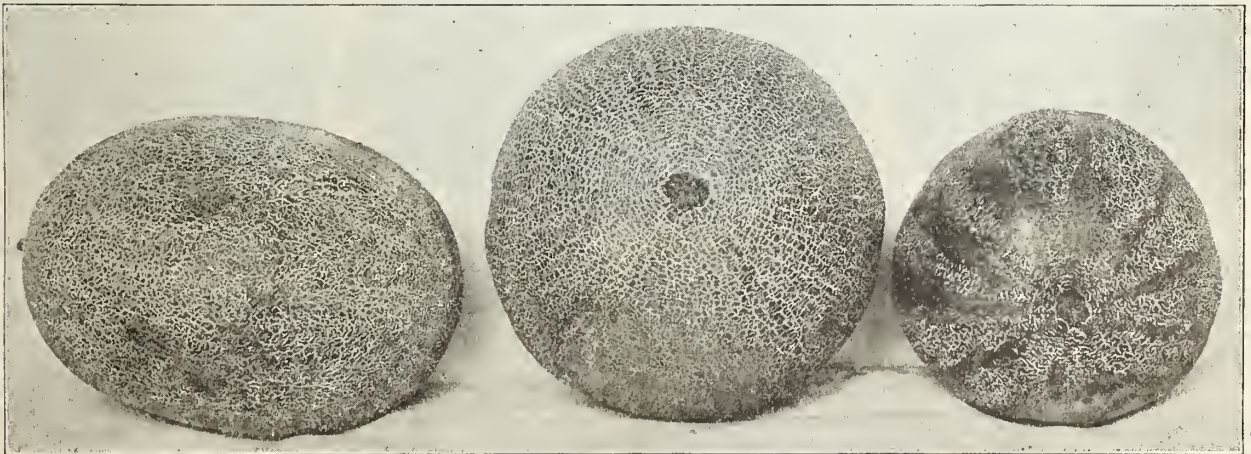
The Golden Honey was first offered by us in 1916 under the name of Hungarian Casaba. It is equal to the Honey Dew in flavor and sold at as high a price throughout the season. On account of the scarcity of seed last season only a few growers offered it, and all state that "it is as good as the Honey Dew and sells as well; its orange color is much in its favor." It is ready to pull when the color is a bright yellow and ready to eat when only slightly soft. We have been advised by one large shipper that it holds up better than the Honey Dew. See picture of the Golden Honey on back cover page.

#### Introductory Offer—Six Pkts. 50c

Golden Hybrid  
Improved Hybrid  
Golden Beauty

Santa Claus  
Golden Honey  
Honey Dew

## A &amp; M Muskmelons



Green Flesh

Yellow Flesh

Rules Choice

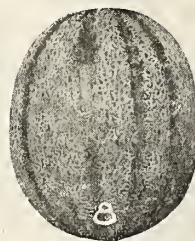
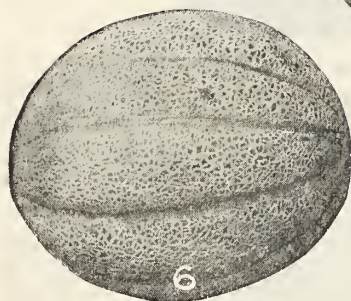
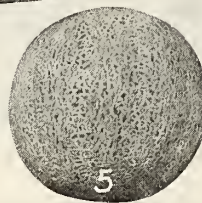
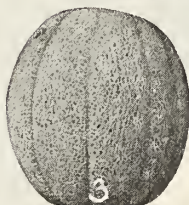
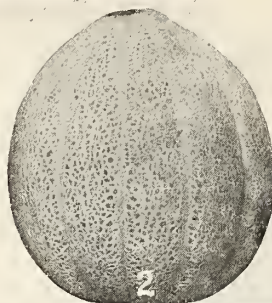
**A. & M. True Armenian Melon** This melon is in a class by itself, just as distinct as the Casaba or Muskmelon, but it is here to stay and is growing more popular each year. There is a persistent tendency to variation as to type, but all melons are good ones. Do not hesitate to plant it. (Pkt. 10c) (oz. 30c) (¼ lb. \$1.00) (½ lb. \$1.75) (lb. \$3.00) postpaid.

**A WORD ABOUT THE TIP TOP MUSKMELON**  
In 1912 a grower whom we persuaded to plant this variety complained to us that the peddler would not buy them. We purchased of him two crates; gave them to a peddler with instructions to give them to his customers, which he did, and just as we had predicted,—from that time on, they would have no other. From that start the Tip Top is now the most popular muskmelon on the market.



- No. 1—Tip Top.  
 No. 2—A. & M. Nutmeg.  
 No. 3—Improved Osage.  
 No. 4—Rock Ford.  
 No. 5—Netted Rock.  
 No. 6—Gautier Pineapple.  
 No. 7—A. & M. Triumph.  
 No. 8—Burrell's Gem.  
 No. 9—Yellow Flesh Columbus.

This picture is of the average type and shows the comparative sizes.



About the second year of our existence, we introduced, without local experience, a muskmelon which was a sensation in the east. In this climate it proved to be a disastrous failure, causing much loss to the growers, and loss of prestige and much embarrassment to ourselves. Never since then have we offered any new thing that has not first been thoroughly tried out here. You can rely upon our new introduction.

**Our Selected Melon Seed** Owing to our extensive trade with large melon growers and associations, we exercise every precaution possible to secure the best type of melons. Having procured the best seed obtainable, we have them grown especially for us. Our seed fields proved the wisdom of this method, for they showed the highest per cent of perfect melons.

Culture, see page 39.

## Yellow Flesh Varieties

**No. 1 A & M Tip Top** This melon is very popular at Long Beach, almost to the exclusion of any other variety. This is a fine, round melon of such attractive appearance as to always sell quickly in the markets. It is sweet, juicy and delicious. The flesh is firm, but not hard, and is edible almost to the rind. The melon is of medium to large size and is one of the best yellow fleshed sorts. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) (5 lbs. \$6.75) postpaid.

### No. 9 Yellow Flesh Columbus

This excellent muskmelon originated here and was introduced by us three years ago. It at once became popular with the cafeteria and hotel trade, where the entire crop of the first year was consumed. The second year the peddlers discovered that it would carry two and even three days on their wagons without deterioration. The storekeeper, too, learned of its good keeping qualities, and the housewife learned to know that every melon is a good one, so that it is now one of the most popular muskmelons in the Los Angeles market. A slightly oval melon about seven inches in diameter, entirely without ribs, but roughly netted; color, outside light creamy, inside yellow. It is enormously productive. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) postpaid.

### No. 8--Improved Burrell's Gem

Has established itself as a standard melon. It is one of the biggest yielders. The shipper calls for it because it is solid and carries well in transit. The consumer wants it because of its excellent flavor. The growers all want our seed because we have the best strain. Many growers who bought of us last year have engaged their seed for next season. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) (5 lbs. \$6.75) postpaid.

**Improved Osage** This has for many years been one of the leading varieties in the East because of its earliness and excellent flavor. It is of medium size, salmon flesh, with green rind, similar to the well-known Burrell's Gem. Once a customer for Osage, always a customer. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

## Green Flesh Varieties

**No.--2 A & M Nutmeg** This melon has now surpassed the Pineapple in popularity. Our largest growers are planting it exclusively. In appearance it is so similar to the Pineapple that many growers fail to notice the slight difference in shape and netting, but the greatest merit is its excellent flavor. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**No. 7--A & M Triumph** Is similar to the Pineapple, but not so large. This is much in its favor, as gardeners are complaining that the Pineapple is too large. It excels the Pineapple, in the excellence of its flavor, and is two weeks earlier. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) (5 lbs. \$6.75) postpaid.

**No. 6--Pineapple** This melon has long been the favorite because of its solidity, heavy netting, and fine appearance. The peddler likes it because it is a ready seller. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**No. 4--Rocky Ford** The flesh is light green in color. The flavor is exceedingly fine. The skin is regularly ribbed and thickly netted. It is a firm, solid melon and will carry in perfect condition for a week or more after its removal from the vine. It is a heavy cropper, and in wide favor as a market melon. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) (5 lbs. \$4.50) postpaid.

### No. 5--Our Gold Lined Netted Rock

This is the Rocky Ford with the tinge of yellow around the seed cavity bred up to the highest state of perfection from the rust-resistant strain. The heavy netting forms a rind so hard that it will ship to the far Eastern markets with practically no deterioration. The flavor outclasses all other strains of Rocky Ford. Turlock growers and shippers will have no other. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) postpaid.

In offering this melon we are quite in line with our established policy of bringing to your attention only the varieties that have been tried, proven and known to be of exceptional merit. We did the experimenting, you take no risk. The Gold Lined Netted Rock is the best type of Rocky Ford melons.

**Irondequoit** We have only a few pounds of pure Irondequoit which may be described as a perfect Tip Top. This we offer in packets only. (Pkt. 10c) variety. (Pkt. 5c) (oz. 30c) (¼ lb. 90c) (½ lb. \$1.75) (lb. \$3.50) postpaid.



## A &amp; M MUSKMELONS—(Continued)

**Los Angeles Market** This is the largest of all the muskmelon family, and we positively state that none will excel it in flavor. Gardeners object to its large size, but good profit will come to the grower who will plant it. It yields an enormous crop and all melons are very large and beautiful. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 85c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**Large Hackensack** Sometimes called Turk's Cap. A large, round melon, flattened at the ends and well ribbed. The skin is deeply netted. The flesh is green, of delicious flavor. It is a strong grower, and is very productive. An old standard melon, in favor with market gardeners. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 70c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**Montreal Market** Large size and delicious flavor. One of the best market sorts. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) (5 lbs. \$5.50) postpaid.

**Jenny Lind** An old time favorite; small, heavily netted, well ribbed, very early and of excellent flavor. (Pkt. 5c) (oz. 10c) (¼ lb. 25c) (½ lb. 60c) (lb. \$1.00) postpaid.

**Pomegranate, or Peach-Melon** For Mangoes (Pkt. 5c).

**INTRODUCTORY OFFER—SIX PKTS. 25c**

1 packet each—A. & M. Nutmeg  
A. & M. Triumph  
A. & M. Netted Rock  
Yellow Fleshed Columbus  
Improved Tip Top  
Los Angeles Market

**INTRODUCTORY OFFER—SIX PKTS. 25c**

1 packet each—Golden Hybrid (Casaba)  
Armenian (Musk Melon)  
Golden Honey (Casaba)  
A. & M. Nutmeg (Musk Melon)  
Klondike (Water Melon)  
Angeleno (Water Melon)

## A &amp; M Watermelons

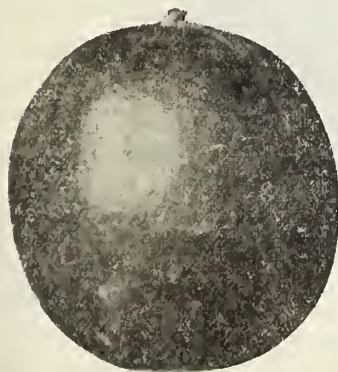
**How to Plant.** See page 39.

**Culture**—Plant the seed in a furrow, dropping six seeds very eight or ten feet apart; cover about two inches. As the vines grow, hill the earth about them until the roots are ten to twelve inches deep. When the vines are safely established, thin out, leaving only two vines to the hill. It is a good plan to establish your rows by throwing the soil toward the center, with one round of plowing, and cultivate every week during the early growth of the plant. This gives deep cultivation at the time it is needed, mulches the soil properly, makes proper rows slightly raised in the center, allowing a low place between for irrigating. Be sure to cultivate after each irrigation, as soon as the nature of the soil will permit. If these instructions are carefully followed you will have thrifty vines throughout the season.

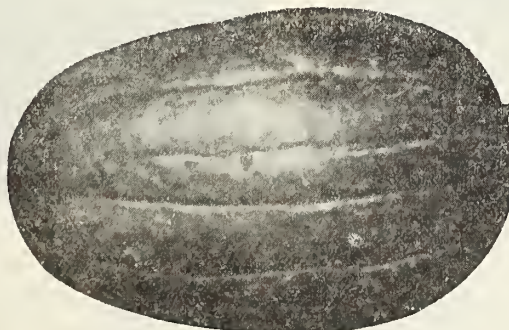
**For Dry Farming** Mr. Charles Richardson says plant 16 ft. apart in rows 18 ft. apart.

**For Melon Blight**—Mr. Van Norman of San Gabriel says, "Cover the centers where the blight first appears, with soil. It gives new life to the vines and prevents the spread of the blight."

**For Melon Wilt**—Pour a cup full of Bordeaux Mixture at the main stem so that the earth will be saturated and the liquid thoroughly applied to the stem. Here is the seat of the trouble, whether fungus or an insect, and the Bordeaux will remove the cause. Butler Bros. of Lamanda complained to us that their vines were dying of wilt. We recommended this remedy which they at once applied only to the vines attacked, with the result that the vines revived, and in one night appeared to have made a new growth of six inches. The vines that were not treated continued to be attacked. They then applied it to the entire field, and saved it for the season. But Mr. Butler says toward the close of the season it appeared again, and he believes the Bordeaux should be applied at least twice during the season.



Chilian



Klondike



Angeleno

**White Seeded Angeleno** The most attractive in appearance of all watermelons,—its large size, beautiful dark green rind with a tinge of gold showing through the green. No other variety compares with the Angeleno in its bright red flesh, red to the rind and entirely free from fibre, simply melts to water, and not excelled in flavor. If the picker will observe the gold showing through the green as soon as it is ripe, he need never pick an unripe melon.

**As a shipper** it is extraordinary because it rarely breaks, even supporting the weight of a man weighing 170 pounds. A careload will average in weight from 25 to 30 pounds to the melon. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) (5 lbs. \$7.00) postpaid.

**Important Notice**—Owing to the tendency of the seed of this melon to split open, we advise you to soak the seed in water for only a few hours. It soon closes and is ready to plant, and every seed will germinate, but if planted before soaking, the seed fills with dirt and decays. Please heed this notice.

**EMMIT H. SMITH, Willows, Cal.:**

"Your Klondike is the finest melon we ever ate. That is what they all say."

**Black Seeded Angeleno** Owing to the persistent demand for a black seeded melon, we have by hybridizing the Angeleno with the **Black Seeded Chilian**, and by four years of selection, succeeded in producing a pure **Black Seeded Angeleno**. It lost none of its excellence; indeed, if it were possible, it has improved. This improvement is noticeable in melons that show a trace of the stripe of the Chilian.

If you want a black seeded melon, do not hesitate to plant the **Black Seeded Angeleno**.

(Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) (5 lbs. \$7.00) postpaid.

**Red Seeded Angeleno** In the process of breeding the **Black Seeded Angeleno** we have some **Red Seeded Angeleno**. This melon differs only in showing more of the stripe of the Chilian. The quality of the melon excels in sweetness the pure **White Seeded Angeleno**. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 85c) (lb. \$1.50) (5 lbs. \$7.00) postpaid.



## A &amp; M WATERMELONS—(Continued)

**Klondike** This is now undisputably the most popular melon on the Los Angeles market. Why? Because it has a flavor quite as distinct from other watermelons as is a Bartlett pear from any other pear, and is sweeter even to the thin rind than any other. It is popular with the grower because it is wonderfully adapted to dry farming, wonderfully prolific, early, long and continuous bearing; the vines seem in their prime in September and October, long after other varieties have disappeared. Planted in rows twenty feet apart on dry soil that has been scientifically prepared the vines will interlace.

One hundred and ten acres in one square level field planted solidly to this melon, hills 20 feet by 18 feet apart, one plant to a hill, the field is nearly covered with vines interlacing everywhere, and every hill yielding enormously of the largest sized Klondikes that ever came to the Los Angeles market. The grower, Mr. Richardson, on October 2nd, said: "I have now 200 tons of ripe melons. Up to the present I sold every melon. The cloudy weather this week stopped the sales a little, but the Klondike is a good keeper. Why, I have cut melons six weeks after they were taken from the vine and found them in perfect condition. "Now when the other fields are all in mine is yet in its prime."

**The Klondike as a Shipper** Owing to its thin rind and its extreme crispness, it was thought impossible as a shipper. Read what Mr. Standlee says of it: "We ship it from the Imperial Valley as early as the Chilian. The melons lost from crispness were too few to take notice of. They arrived in perfect condition, showing no wilt whatever, and sold more readily at from ten to twenty cents per hundred pounds more than other varieties. The carload averaged twenty-five pounds per melon."

The seed is small. One pound of Klondike will number as many seeds as two pounds of other varieties. The color of the seed is brown, mottled black. **Brown seed (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.20) (lb. \$2.00) (5 lbs. \$9.00) postpaid.**

**Black Seeded Klondike** Owing to the demand for a black seeded melon, we have done with the Klondike precisely as we have with the Angeleno. See description of Angeleno on this page.

(Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.20) (lb. \$2.00) (5 lbs. \$9.00) postpaid.

**The Tom Watson** has for several seasons been the most popular melon in the South. Its shape is similar to the Kleckley Sweet, but the color is a lighter green. Its great merit is in its earliness, good flavor, thin rind, and good keeping qualities, making it one of the best of shippers. It is popular in the San Joaquin Valley. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 70c) (lb. \$1.25) (5 lbs. \$5.75) postpaid.

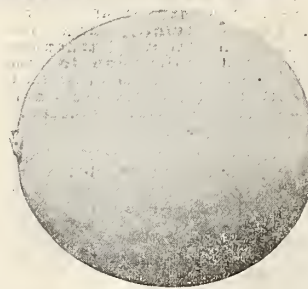


Tom Watson, Weight 80 lbs.

**Blight-Proof Melon** The Department of Agriculture sent out sample packet seeds of a "Blight-Proof Melon." Mr. Bergman of Burbank had expressed to us his regret that he could raise no watermelons because of the blight which infested his soil. He planted this packet of seed in this soil, and sure enough there was no blight. Even without irrigation the vines looked thrifty, and the picture shows a 32-lb. melon grown on the dry, blight-infested soil. This melon, as well as every melon we opened, proved to be of excellent flavor and would prove to be a good shipper. We do not hesitate to recommend it for any purpose, but especially to be planted where blight exists. (Pkt. 10c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.25) (lb. \$2.00) postpaid.



Blight Proof Melon



Winter Melon

## Winter Melon

This new melon is slowly but surely forcing itself into favor because of its many good qualities which are now apparent at first acquaintance. Like the Casaba which required 12 years to establish its reputation, the Winter Melon might easily be mistaken for a small white citron and the peddler must be convinced he in turn must convert his customers to the knowledge that the Winter Melon is a thing of great luxury. Read the description carefully. It's late to mature; very light in color with a suspicion of a stripe; size 10 inches in diameter; seed small shiny black, flesh pink, solid and stringless. The flavor when cold is sweet, crisp and surprisingly delicious, and when you have finished you realize that you have eaten a melon entirely distinct from a water melon, as the Casaba is apart from the Cantaloupe and just as delicious. Like the Casaba is should not be eaten right off the vine, but be allowed to lie around until the first signs of decay. It decays slowly as an apple, not like other watermelons. We prophesy this year of 1917 that the melon will be, sooner or later, handled in carlots for late fall shipping, as is the Golden Beauty today, because it has merit that will win.

The seed is scarce and while it lasts we will offer it at low introductory prices. **Pkt. 10c) (oz. 50c) (¼ lb. \$1.00) (½ lb. \$1.75) (lb. \$3.00).**

**Chilian** For twenty years the leading melon and just as popular today as at any time, and is likely to continue its popularity for many years to come. Its thin rind and delicious flavor commend it to the consumer, but its good shipping and selling qualities make it a favorite with the grower and dealer. It is very prolific and just a desirable size for the peddler to handle, and every melon is a good one.



Chilian

## White Seeded Chilian

Preferred because of its large average size.

## Red Seeded Chilian

Preferred because of a sweet flavor peculiar to itself and earliness.

## Black Seeded Chilian

Preferred because of its earliness, short crop and black seed, which gives it preference at restaurants, hotels and cafeterias.

restaurants, hotels and cafeterias.

All Chilians are good regardless of the color of the seed but the Black Seeded one is planted for early.

**Price of all Chilians (Pkt. 5c) (oz. 10c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) (5 lbs. \$6.00) postpaid.**

Mr. Frank Johns, from Riverside County, writes us: "I want your very best watermelon seeds. Those you sent me last year were good enough. I sold \$174.00 worth from ½ acre. That is why I prefer good seed."

**Rattlesnake** Has long been a popular melon with shippers. It is a long melon, having a white rind, with dark green stripes. Flesh of excellent flavor. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) postpaid.

## Yellow-fleshed Ice Cream Watermelon

This melon grows to a very large size, is long in shape and the rind an even dark green. In quality it is simply delicious, sugary and of a rich flavor peculiar to itself. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) (5 lbs. \$6.75) postpaid.

### INTRODUCTORY OFFER—SIX PKTS. 25c

1 packet each—**Black Seeded Angeleno**  
**Klondike**  
**Black Seeded Chilian**  
**Excel**  
**Yellow Ice Cream**  
**Blight Proof**



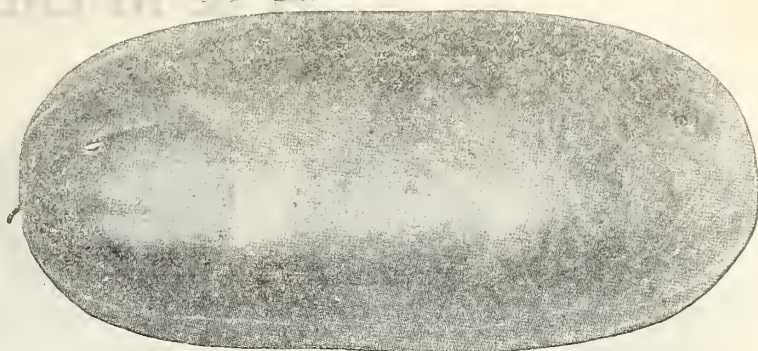
## A &amp; M WATERMELONS—(Continued)

**The Excel** A new black seeded melon that has made a sensation in the South and in the San Joaquin Valley. Its surpassing merits are in the size (average weight per melon in car is 35 pounds); enormous yield and excels all others as a shipper.

Read what the originator says of it:  
"During the last two years a great many growers of watermelons for market have demanded another melon, claiming the Watson would not stand far distant shipping satisfactorily. During 1912 and 1913 I made numerous trial tests of a number of supposed new varieties, but none proved satisfactory excepting the 'Excel.' After my trials in 1913 I concluded to put out several hundred acres in 1914 for market, and the results of this crop was so satisfactory, and the melons pleased my customers so well, that I do not hesitate to recommend this melon as a market sort to every planter of melons. In fact, it will produce more large marketable melons under the same condition than any of the other sorts of the long variety, and its carrying and keeping qualities are unsurpassed."

We planted an acre on our trial grounds and find it is not only all that is claimed for it, but we were surprised at the excellence of its flavor.

We recommend it to all shippers who want a very large melon. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) (5 lbs. \$4.75) postpaid.



Excel. Wt. 68 lbs.

**Kleckley Sweet**

This is an excellent melon either for the home garden or for shipping. It is of medium size, a very green rind, with deep red flesh of delicious flavor. Our seed positively cannot be excelled. (Pkt. 5c) (oz. 10c) (¼ lb. 30c) (½ lb. 60c) (lb. \$1.00) (5 lbs. \$4.75) postpaid.

**Florida Favorite**

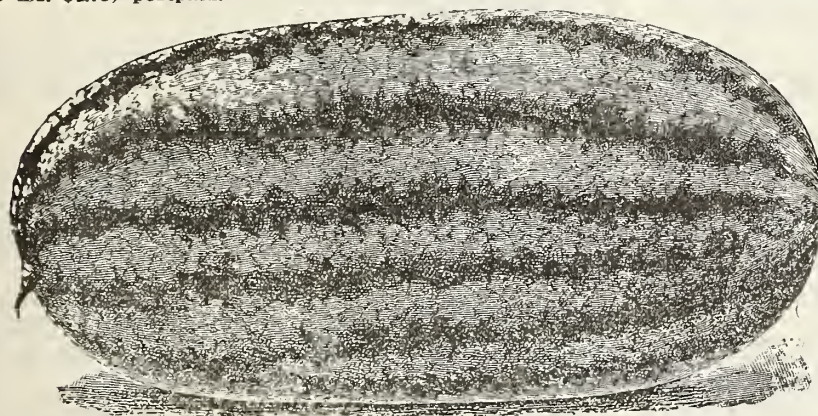
This melon is very popular with shippers, because of its extreme earliness, and all round good qualities as a good shipper. In appearance it is similar to the Rattlesnake, the rind being considerably darker. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) (5 lbs. \$4.75) postpaid.

**Citron, Large Green Striped**

Weights from thirty to sixty pounds. Is better than pumpkin for stock. Allowed to lay in the field or piled in the barnyard will not be damaged by frost nor decay until the following summer. (Pkt. 5c) (oz. 10c) (¼ lb. 25c) (½ lb. 40c) (lb. 75c) postpaid; (10 lbs. \$6.00) f. o. b. here.

**Citron, Red Seed**

Small dark rind round melon used for jam and preserving. It has an excellent flavor. (Pkt. 5c) (oz. 10c) (¼ lb. 25c) (½ lb. 40c) (lb. 75c) postpaid.



Florida Favorite

## A &amp; M Packet Seeds

**READ**

Look for this case. If your dealer does not carry Aggeler & Musser Seed Co.'s packet seeds, request him to get them, because we do not put our seeds out on commission. Commission seeds are put up and placed on sale throughout the country in August, long before new crop seeds are harvested. Therefore the seeds are at least one year old before they are put into packets. Our packets are never put up until the new crop seed has been delivered. You are sure to get fresh seeds when you buy from the AGGELER & MUSSER SEED CO.'S CASE.

**For Cleaning Seeds**

We have the most complete and best equipment in the city for cleaning and re-cleaning seeds of all kinds and of every description. At an expense of several thousand dollars we have installed three Clipper fanning mills, one suction cleaner, and the lately invented Myers Gravity Separator, which is the latest word in seed cleaning machinery. It readily separates the good seed from the bad by process of gravity. Every employee connected with the house has instructions to see to it that no unclean seed is allowed to pass. Therefore we request you to report to us any violation of these instructions.

**For Testing Seeds**

We have with us a graduate from the agricultural college at Davis, whose duty it is to test all seeds when they come to us and again in six months a general test is made. You can write us at any time for a germination test on any seed you contemplate buying.

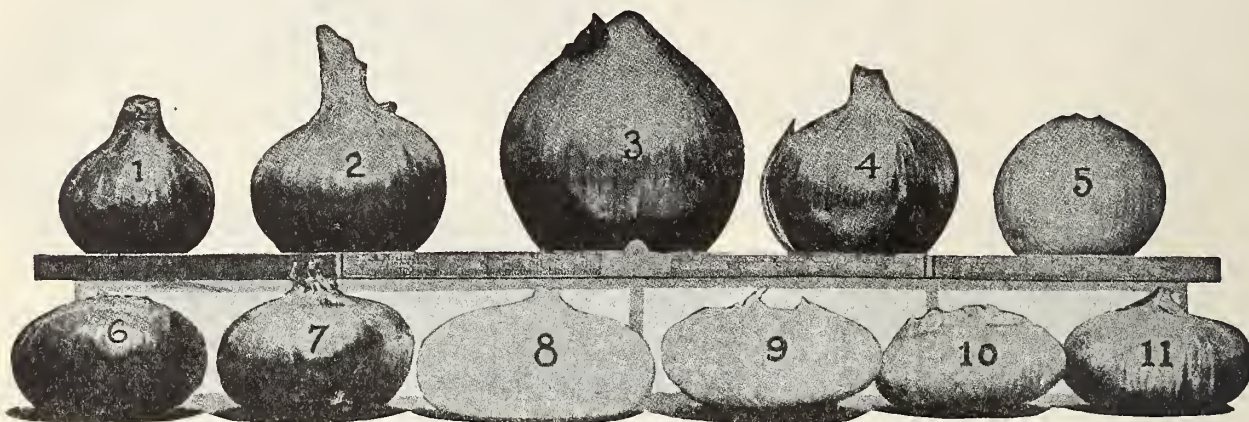
**PLANT A HOME GARDEN NOW**

Vegetables from the home garden are always the best. No market vegetables ever have the sweetness or flavor of those just gathered from your own back yard garden. You don't need to plant lots of seed; from a few feet of ground a supply of vegetables for a family can be grown. A back yard containing a small, well-cultivated vegetable garden is an ornament to a neighborhood. Be sure to plant a vegetable garden this spring.

Be sure to buy A. & M. packet seeds.



# A & M Onions



1. Australian Brown  
2. Ohio Yellow Globe.  
3. Prize-taker

4. Yellow Globe Danver  
5. Southport White Globe  
6. Yellow Flat Danver

7. Red Weathersfield  
8. New Queen  
9. White Portugal

10. Crystal Wax  
11. White Bermuda

**Culture**—No crop is so liable to variations by cultivation and soil as the onion. Having rich soil with too much irrigation will produce thick-necked scallions, while the same soil, well drained, would produce the finest onions. A sandy loam well fertilized is best.

No vegetable is so sensitive to variation of climate as the onion. It is of utmost importance that the right variety is selected for each month in the year, and for your particular climatic conditions.

Either drill the seed thinly in rows fourteen inches apart, or sow the seed in seed beds, and when the plant is as thick as a straw, transplant on ridges; set two rows on each ridge and four inches apart in the row. See page 17.

Irrigate in the furrow between the ridges to avoid flooding the onion, which causes the onion to rot readily, rendering it unfit to ship or to keep.

To succeed in growing onions it is highly important to make a proper selection of seed suitable to the time of planting. West of the Coast Range plant Early varieties August and September. They will then attain marketable size in March and April. If, however, the weather during February and March proves to be cold and rainy, a large percentage will shoot to seed. We advise that you pinch off the seed stem close to the onion. It will heal with no damage to the onion. East of the Coast Range, where the temperature seldom goes below 25 degrees, plant the Crystal Wax or Bermuda onion in September. We advise planting all other varieties from October until April, selected according to the market in which they are to be sold, and the facilities for irrigating.

The consuming public prefers a white onion. The retail merchant wants a yellow onion because the white are too perishable. The shipper will handle the yellow, but prefers the brown because it is the best keeper.

The Southport White Globe is now popular because of its good keeping qualities.

Three pounds of seed are required to plant one acre for dry mature onions. One ounce will plant one hundred feet of row. For bunching onions, plant one-fourth pound of seed to 100 feet of row.

We claim our onion seed to be the highest type as to germination and purity. When you wish to plant onions consult us to when, how and what variety to plant.

Onions intended for storage or long keeping should be taken up while the stems are yet green, just showing a tendency to dry up. Experience has proven that this is the best time. When allowed to remain in the field too long they are liable to be sun-scalded, or attacked with smut.

**MARKET**—The market for onions is large; no other vegetable is in such wide demand and is used largely by all nations over the entire world, yet on account of the perishable nature a wide distribution is not possible; therefore, an over-production is soon a drug on the market and the grower finds the crop worthless. Last year onions were selling as high as \$10.00 for 100 lbs. In March, and by June 20th farmers were letting them waste in the fields, or worse, shipping them and being obliged to pay the freight.

Therefore, when planting them, select the variety according to the market for which they were intended, time of planting and your locality. The early shippers plant the Crystal Wax and Yellow Bermuda in September.

For shipment, you will make no mistake to plant Yellow Globe from September 15th until March; White Globe or Silver-skin November 1st until April 1st, and the Australian Brown from January 1st until April 1st.

For early local trade, plant Crystal Wax, Yellow Bermuda, Prize-taker, Denia, Giant Gibraltar and Ailsa Craig.

**Yellow Flat Danver** Similar to the Yellow Globe in color and quality, but somewhat flattened in shape, and is earlier. It is a fine large onion with a very small stem. (Pkt. 5c) (oz. 45c) (¼ lb. \$1.35) (½ lb. \$2.20) (lb. \$4.00) postpaid.

**Ohio Yellow Globe** This onion is the standard winter sort in many markets. The shape is almost globe form and the bulbs are quite large with thin necks. The skin is yellow, while the flesh is pure white, solid and of good quality. Its earliness makes it valuable for market. The crop is very uniform and ripens at one time. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.70) (½ lb. \$2.75) (lb. \$5.00) postpaid.

**Extra Early Red Flat** This is the early onion grown in the Sacramento Valley for the San Francisco market, where it is in great demand. (Pkt. 5c) (oz. 40c) (¼ lb. \$1.20) (½ lb. \$1.75) (lb. \$3.50) postpaid.

**Red Weathersfield** Probably the most popular red onion, and the one grown more largely throughout the United States than any other. It is a large, medium flat onion of excellent mild flavor. (Pkt. 5c) (oz. 50c) (¼ lb. \$1.50) (½ lb. \$2.50) (lb. \$4.50) postpaid.

**Southport Red Globe** This beautiful onion is coming into favor here. It keeps better than other red varieties. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (½ lb. \$2.75) (lb. \$5.50) postpaid.

**Australian Brown** Quick to mature; a good keeper, solid and heavy; an excellent onion for shipping. The skin is a light brown. Its solidity gives it great weight and a sack weighs several pounds heavier than a sack of other varieties. The onions are thin-necked and ripen very early in all soils. As the plant makes a very quick growth it matures the bulbs before the hot, dry summer weather sets in, and this in connection with its exceptional keeping qualities makes it a most profitable variety. (Pkt. 5c) (oz. 30c) (¼ lb. 90c) (½ lb. \$1.35) (lb. \$2.50) postpaid.

## White Portugal, or Silverskin

A good second early white flat onion to follow the Extra Early White Queen. It should be planted any time from November 1st until April 1st. It is a good keeper and desired for shipping. It has long been a favorite, and probably no other variety is more generally popular with growers throughout the United States. Under good cultivation the average diameter is from four to six inches. The thick skin is a clear silvery white, flesh snow-white, sweet and tender. (Pkt. 5c) (oz. 65c) (¼ lb. \$2.00) (½ lb. \$3.00) (lb. \$6.00) postpaid.

To obtain the highest price, this variety should be planted about February 1st; they will then mature about Aug. 1st, and if the prevailing price is too low put them in cold storage.

## The Big Money-Maker

**Southport White Globe** This onion now easily leads all other varieties in popularity on the Los Angeles market, and is selling more readily and at higher prices. It is a good keeper, either in the field or in cold storage. It is a silvery white in color, globe shaped, and of delicious flavor. It is the popular onion with the shipper. (Pkt. 5c) (oz. 75c) (¼ lb. \$2.25) (½ lb. \$4.00) (lb. \$7.00).



## A &amp; M ONIONS—(Continued)



Yellow Bermuda

## WHY CALIFORNIA GROWN SEED IS BEST

We could fill these pages with testimonials in praise of the California grown seed, but this letter states in briefest form the substance of all.

## What Others Say

"2700 crates from 4 1/2 acres.

"15 carloads, 540 crates each, from 15 acres.

"1100 crates from one acre at Ashetton, Tex.

"1219 crates (60950 lbs.) from one acre in Coachella Valley,

"From 20 acres one grower banked \$15,000.

At Laredo, Texas, the 1917 crop showed an average of 284 crates per acre, the highest record in 20 years. 1917 was the first year that any considerable quantity of California grown seed was used (about 9000 lbs. was used in Texas that year).

## From a California Grower:

"The imported seed doesn't hold a candle to my own. My Yellow Bermudas run almost perfect as to off-color; the imported runs heavy to reds. My Wax shows less than 1/2 of 1% yellow."

## CALIFORNIA ONION SEED SUCCESSFUL IN BERMUDA

[Consul Carl R. Loop, Hamilton, Bermuda, Apr. 24.]

In November, 1915, trade letter was received at the Hamilton consulate from an onion-seed firm in California. This letter was brought to the attention of the Director of Agriculture of Bermuda, with the result that 2 pounds of seed were ordered at once by cable. These seeds were planted at the agricultural station, with such satisfactory results that a local firm was induced to accept the agency in Bermuda for the sale of California onion seed. The Director of Agriculture states he anticipates that California will be the source toward which Bermuda will look in future for its supply of onion seed. The following statement is from the Bermuda Colonist and Daily News:

"We have on exhibition in our office a number of onions grown from imported California seed. The bulbs are exceptionally fine in appearance, being good and solid with plenty of thickness in proportion to diameter, but the point that will interest the Bermuda farmer the most and possibly affect the future of the Bermuda onion industry is the fact that the seed germinates very rapidly and tests have shown 98 per cent fertility. From the time of setting out the young plants to reaping the crop the time elapsed was four days less than three months to produce onions averaging 7 ounces apiece. Local tests have shown that seeds come practically true to type, not 1 per cent showing silver skins, and less than one-half of 1 per cent showing any trace of red."

## Growers of Bermuda Onions READ THIS!

We have a limited number of Prof. F. W. Mally's Bulletin on the subject of **The Bermuda Onion**.

It is thorough and complete in every detail of the culture of this onion,—preparation of the soil, seed beds, preparation of the field, planting, culture, irrigation, cultivation, fertilizing, harvesting and marketing.

Much of the cultural instructions in this book will apply to other than The Bermuda Onion.

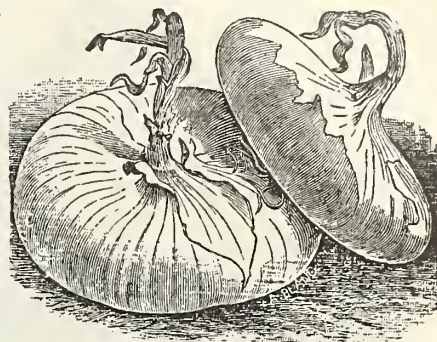
If you wish this Bulletin, send five 2-cent stamps either to us or to the Commissioner of Agriculture, at Austin, Texas.

## Crystal Wax and Yellow Bermuda

These two varieties go hand in hand; they require the same climate and culture; where one thrives the other also thrives. They mature at the same time and bring about the same price on the market.

The Crystal Wax is a medium sized pure, waxy white onion. The Yellow Bermuda is about the same size as the Crystal Wax, but a yellow straw color.

These are the varieties that are grown in Southern Texas and in Coachella and Imperial Valleys to the exclusion of every other variety. Why? Because they are adapted to that climate; because when planted the latter part of September they mature in March and April, just when the market is bare and the price is highest. Onion growers are satisfied with 300 crates per acre, and 25% off color. Our seed produces 500 to 800 crates per acre, with less than 1% off color.



Crystal Wax Onion

**Crystal Wax—(Pkt. 10c) (oz. 60c) (1/4 lb. \$1.75) (1/2 lb. \$3.00) (lb. \$5.00) postpaid.**

**Yellow Bermuda—(Pkt. 5c) (oz. 35c) (1/4 lb. \$1.00) (1/2 lb. \$1.75) (lb. \$3.50) postpaid.**

Laredo, Texas.

Gentlemen:—

Referring to your inquiry of recent date with regard to our results in the planting of Aggler & Musser Seed Co's California grown onion seed. I wish to say that I have planted this seed the past three years, the first year giving such good results in comparison with other seed planted at the same time that I discarded all other seed and have planted the past two years nothing but the California grown "Bermuda" Onion seed both Crystal Wax and Yellow.

The germination has always been excellent two-and-half pounds of seed planting one acre of good selected, thrifty plants

These plants in 1916 produced 648 bushel crates per acre. In 1917 they produced 672 bushel crates per acre

Their keeping quality was also excellent, as I am just digging the last of my crop and find 75% good onion eleven months after planting the seed.

Yours truly,

*H. E. Graham*  
Vice-President y Gerente General

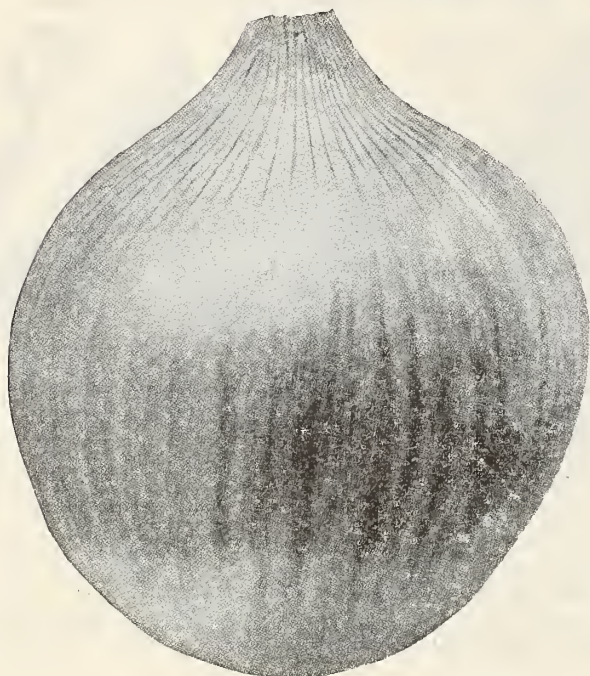
Onion seed is very scarce. Why?

The season of 1917 was very unfavorable. In June just as the seed was in the milk, a few hot days scalded the tender seed pods blighting them, with the result that those fields were in such condition produced 15%, and less, of a crop. Then, too, the demand for onion seed has nearly doubled and the growers were not prepared. Also, the high price of onions makes it more profitable to sell them than to plant them for seed.

Therefore, the present high prices of onion seed is caused by an unfavorable growing season; unprecedented demand, and high prices of onions which are used for seed bulbs



# The Big Four Spanish Onions



**Prizetaker**

To encourage competitive growing, we offer one packet each of the "Big Four" for 25c.

## Prize Offer Read

We offer \$1.00 to each of ten growers who will bring or send us the largest onion of any of the four varieties.

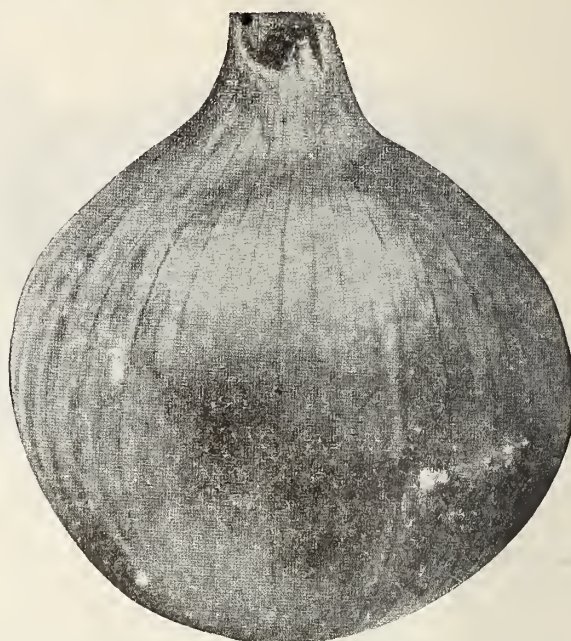
Also

- \$1.00 for the largest Denia.
- \$1.00 for the largest Prize-taker.
- \$1.00 for the largest Ailsa Craig.
- \$1.00 for the largest Giant Gibraltar.

## READ

Each year we have calls for seed of the large Spanish Onion because individual reports indicate enormous returns from a small acreage. Therefore, we have resolved to meet the demand and have devoted a full page of this catalog to let you know we have what you want. Every home garden should compete for the prize offered on this page.

**Giant Gibraltar** Large, Brownish Yellow, somewhat flattened on under side; often weighing four lbs. Is a good keeper and is known to be adapted to climatic conditions of the southwest and Texas.



**Denia**

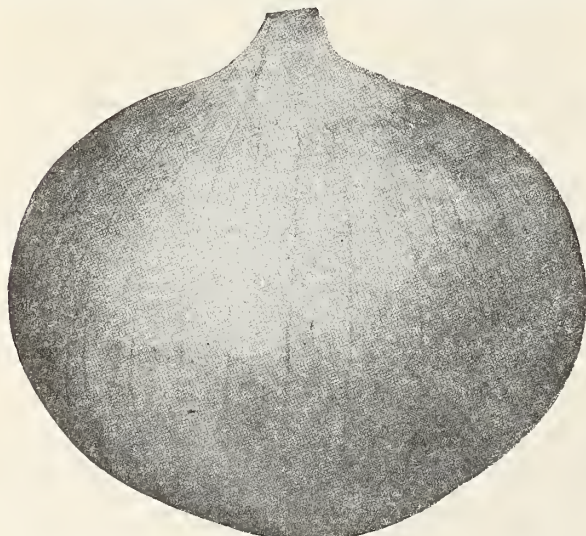
**Denia** One of the large Spanish types with extra-ordinary mild flavor; nearly a globe shape, slightly flattened, and nearly pure white. It is popular in the south and we recommend it to gardeners having a large local trade and who want the heaviest yield possible.

**Prizetaker** The handsomest, largest Yellow Globe Onion—A good keeper, of finest flavor, handsome shape and enormous size, many single onions having been raised to weigh five pounds or over from seed the first year. The Prizetaker grows always to a perfect globe shape with a bright straw-colored skin.

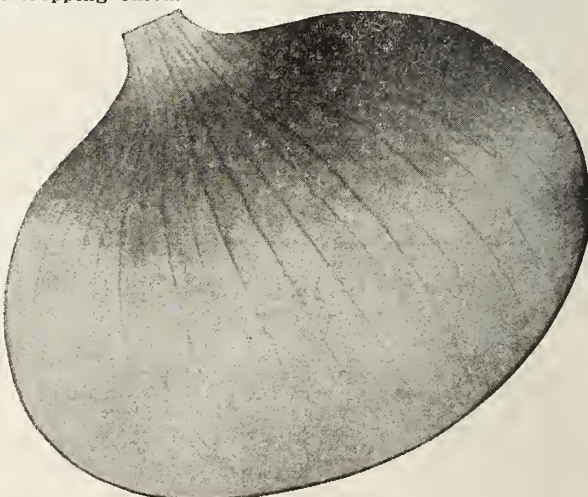
J. H. Peck, Selma, Cal., writes: "I planted ¼ lb. of your Prizetaker onion seed last year on March 4th on just one-tenth of an acre on reclaimed tule land, never irrigated at all. I harvested 95 sacks of 100 pounds each of fine marketable onions weighing from ½ to 3 lbs. each."

L. B. Kennedy, Gorman, Cal.: "It may interest you to know that last year I planted ¼ lb. of your Prizetaker onion seed, from which I grew one ton of the best onions ever raised in this district. I sold 20 100-lb. sacks at \$2.00 per sack. I kept enough besides for our own use. They were grown without irrigation, but the soil was damp and very alkali. I am trying the Australian this year because although the Prizetaker is good they are not good keepers."

**Ailsa Craig** Large, Light Yellow, globe. Average weight of 600 onions from one row (not selected) 2½ lbs. Extra selected 3 lbs. 9 oz. Probably the largest and heaviest cropping onion.



**Ailsa Craig**



**Denia**

Price of each one of the four Big Spanish Onions (Pkt. 10c) (oz. 50c) (¼ lb. \$1.50) (½ lb. \$2.75) (lb. \$5.00).



## Bunching Onion

Many think any white onion will do for a bunching onion, but this is not true. Our growers for fancy trade have learned that we have the best strain of seed for this purpose, and our sales amount to thousands of lbs. each year. The picture shows a sample of what our seeds produce. They are just the right shape. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (½ lb. \$2.75) (lb. \$5.50) postpaid.

## Chives

This species of onion is extensively used for flavoring. A small spot in the garden planted to Chives will supply a family the year



Bunch Onions

round. (Plants, 1 bunch, 10c) postpaid

Chives are also easily grown from seed. Sow in beds and transplant as soon as they begin to multiply. (Pkt. 10c) (¼ oz. 30c) (oz. \$1.00).

**Onion Plants** We have on hand from time to time Onion Plants, usually of the Southport White Globe which is excellent as a bunching onion, as well as a dry onion.

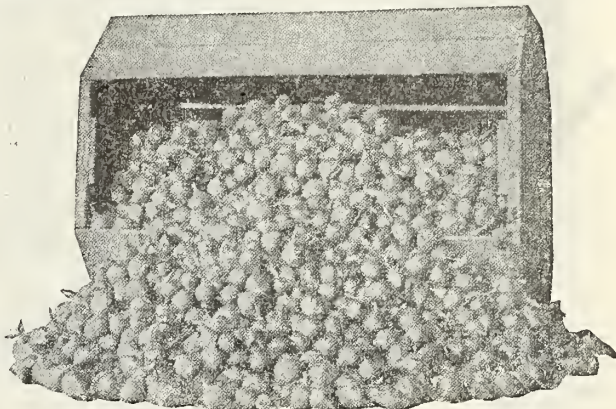
(Sold in bunches of 100 at 20c per bunch; 30c postpaid. For large quantities write for price.)

## A & M Onion Sets

Australian Brown, Yellow Danver (lb. 35c) and Silver-skin (lb. 40c) prepaid. Write for quantity prices.

The earliest onions are grown from sets planted in September. This brings them in the market in February and March, when prices are highest. About 250 lbs. of sets will plant one acre.

For the home garden no vegetable is so valuable as the onion, and for this purpose it is better to plant sets, because they are ready for the table six weeks after planting. Set them three inches apart in rows six inches apart. When ready for use, take up every other one as needed, allowing the balance to grow to mature size. One pound of sets will plant about fifty feet of row. (Lb. 30c postpaid) (10 lbs. \$1.50 f. o. b. here). For larger quantities write for prices, which range from \$10.00 to \$15.00 per 100 lbs.



Onion Sets

## A & M Imperial Garlic

**MARKET**—A little Garlic goes a long way. The demand is steady but limited and very little is shipped; therefore, the way to make the greatest profit from Garlic is to grow a small plot for local market, but get it early. To do this it is necessary to plant the Imperial Garlic which is two months earlier than the common.

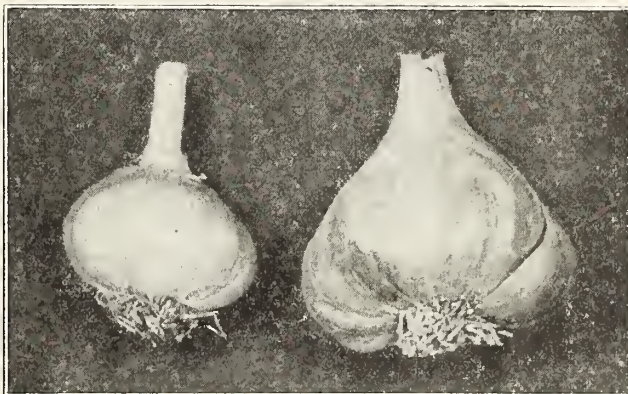
**The Imperial Garlic** Originated in the Imperial Valley, and is peculiarly adapted to that kind of climate. Like the Bermuda Onion, it matures quickly and must be harvested before the extreme heat of summer. Read what the originator says of it: "In reply to your note regarding the superior points in this garlic:

"1st—It is 6 weeks to two months earlier than any I have ever tried; will mature in about five months from planting. Last season I planted October 2st and shipped the first April 7th, well matured. I bought 100 lbs. of the Large White and planted the same time. I harvested it June 1st, and got about one-half as much per acre, of an inferior quality.

"2nd—It will produce about as much again, bearing as high as forty cloves in a bulb, eighteen being the most in any other variety I tried.

"3rd—It comes up readily and grows all winter and matures the first warm weather we have in the spring, while the other kinds will make but very little growth in cold weather. This garlic is the kind that will succeed in the hot valleys of Imperial, Coachella, Yuma or in Texas, where the Bermuda Onion thrives.

"4th—My garlic was all harvested and marketed before the advent of the thrip, which did much damage to the late varieties. September and October are the proper months for



Common

Imperial

planting garlic, but the Imperial Garlic may be planted as late as February."

**Imperial**—(Lb. 40c) (Common 30c) postpaid. Write for quantity price.

### THE WAR AND THE SEED TRADE (Continued from last year's Catalog)

The situation this year further emphasizes the following statement.

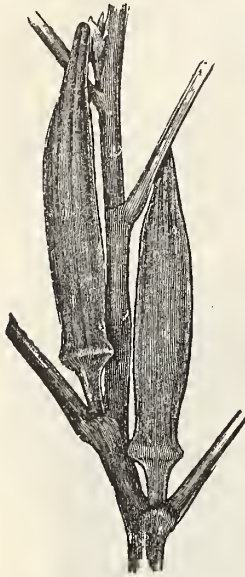
With the prolonged turbulent conditions in Europe centered right in the region of our greatest source of supply of seeds for the biennial crops such as Cabbage, Cauliflower, Beets, Turnips, etc., and many annuals, particularly Spinach, a serious shortage has been caused in seeds of these varieties. However, the condition is redounding to the benefit of American seed growers. California can now supply us with nearly every variety of seed we need.

All America and Europe are now looking to California for seed so essential to the life and prosperity of a nation. Our export business in seeds is indeed surprising, and the new varieties of seeds that almost imperceptibly grow to enormous proportions, for instance California is now acknowledged foremost in onion, celery, cauliflower, casaba, radish, peas, beans, sweet peas, and about every variety of bower seeds listed in this catalog.

It was the cheapness of some European seed that deterred California growers from enlarging their list of crops. Present conditions abroad will permanently benefit the California seed grower.



## A & M Okra, or Gumbo



A good and healthful vegetable for a summer crop.

Culture—Plant seed from April 1st until Aug. 15th. Plant six to ten inches apart in rows three feet apart. One ounce will plant one hundred feet of row.

### A & M Early Greenpod

We have for a long time endeavored to produce an okra that is earlier than the White Velvet, which has long been the popular market variety. We have succeeded by selection, in producing not only an earlier variety, but a much more tender and prolific okra, and have named it Aggeler & Musser's Early Greenpod.

It is just the thing for the truckers in the Coachella and Imperial Valleys, because it matures in April, fully a month ahead of other varieties; bears continuously until late in the season.

The pods are three to four inches long, deep green in color, and when young are absolutely stringless.

Every home garden should have this variety, as should the trucker. (Pkt. 5c) (oz. 10c) (¼ lb. 30c) (½ lb. 50c) (lb. 85c) postpaid.

### White Velvet

On account of its attractive white color, good flavor and tender pods when quite young, it has long been a favorite variety. (Pkt. 5c) (oz. 10c) (¼ lb. 25c) (½ lb. 40c) (lb. 75c) postpaid.

**Mammoth Long Pod** We have greatly improved the original strain and now its productiveness is simply wonderful, the pods shooting out from the bottom of the stalk within three inches of the ground, and the whole plant is covered with them to the height of a man's head, five to six feet. Pods are an intense green in color, of unusual length, nine or ten inches, tender, and of good flavor. (Pkt. 5c) (oz. 10c) (¼ lb. 25c) (½ lb. 40c) (lb. 75c) postpaid.

## A & M Parsley

Culture—Same as lettuce. (See page 5.)

**Champion Moss Curled** Extra dark. Leaves crimped and curled, giving a most beautiful decorative appearance. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 70c) (lb. \$1.25) postpaid.

**Emerald or Dwarf Extra Curled** Leaves tender, beautifully crimped; handsome, bright green color; very ornamental. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 70c) (lb. \$1.25) postpaid.

**Extra Double Curled** A good curled variety for garnishing. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 70c) (lb. \$1.25) postpaid.

**Hamburg Turnip Rooted** Fleshy vegetable roots for soups, etc. (Pkt. 5c) (oz. 10c) (¼ lb. 30c) (lb. \$1.00) postpaid.



Moss Curled Parsley

## A & M Parsnip

(See Bunch Goods, Page 25)

### Our New French Parsnip

Just right for the market gardener. The picture shows the actual size at time of marketing. It grows slightly larger, but it attains this size in ninety days, which is a full month earlier than other varieties. It is crisp and succulent. It will at once supersede all other varieties because of its all-round desirability. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.



**Devonshire** This Parsnip was recommended to us by our European growers. Today it is the most popular Parsnip with our market gardeners. It is scarcely more than half as long as the Hollow Crown, but it is often three inches in diameter. Tender, and has an excellent flavor. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

### Hollow Crown

Has long been a favorite in the family garden on account of its excellent table qualities. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

New French  
Parship  
Actual Size

## A & M Peanuts

Write for Special Circular

**Georgia Improved Peanut** This variety is much superior to the ordinary Peanut, yielding fewer imperfect pods and combining earliness, productiveness and size; yields on ordinary land about 40 sacks to the acre. (Lb. 35c) prepaid; (100 lbs. market price.)

**Tennessee Red** Is an excellent variety, bearing three or four kernels to the pod. The kernels are of medium size and of good flavor. It is the favorite variety with the confectioner. (Lb. 35c) prepaid; (100 lbs. \$12.00) f. o. b. here.

### READ

The Peanut is too much neglected. Its various uses are of great economic value. Its value as a food is well-known, but few ranchers realize its value as a soil renovator, adding humus and nitrogen. As hog food there is nothing better. It is easy to feed if the hog may be allowed to do the rooting. The straw is rich in food value and may be pastured green, cured as hay or ensilaged, and the yield of hay is from four to five tons per acre. It grows on soil that may be too sandy for other crops. Therefore, if you have sandy soil, make it valuable, by planting peanuts.



Virginia Peanut



# A & M Garden Peas

Write for quantity prices on all varieties.

The 1917 crops of garden peas have been very short throughout the country. Many varieties have failed entirely so that while we have listed them we have none to offer until new is gathered next July.



Stratagem

Admiral

Perfection

Telephone

## Home Garden

For the home garden we recommend Nott's Excelsior, to be planted for very early peas, and if they can be trellised, the Tall Telephones for later crop. If they cannot be trellised, plant Admiral, or any other of the late varieties offered here. All are good.

**Culture**—Peas are very susceptible to soil and climate. Within the radius of a few miles from Los Angeles, and in one locality or another peas may be grown every month of the year.

In a thermal zone plant peas from September 1st to February 1st, and in lowlands from January 1st to September 1st. In summer months, from May to September, plant three inches deep in heavy soil and more deeply in sandy soil. From December to April plant not more than one inch deep. The object of this is to have the seed deep enough to lie in moist earth, and shallow enough to get warmth from the sun. Never irrigate after planting peas until they come up. Irrigate before planting, but do not plant until the soil is tillable.

Peas will rot in soil that is too wet, especially during the winter months. They will stand a great deal of frost and cold weather until they bloom, but after they bloom a heavy frost will destroy the pods, and if cool enough, will kill the vines. Many planters sow one hundred pounds of seed per acre, but fifty pounds of seed per acre drilled in rows and well cultivated will produce larger pods and more peas per acre; besides, there will be less mildew. Put the rows north and south for winter planting to give them as much sun as possible.

At the first appearance of mildew, spray with the best sulphur obtainable, and do the spraying in the morning. If your soil is sandy it would be well to inoculate the seed with Nitrogen Bacteria.

## Carloads of Green Peas

**MARKET**—Every Christmas day every household within the United States may have on the table green peas grown in Southern California, right fresh from the vines.

Hundreds of acres are each year planted in September for northern and eastern consumption. This crop is ready for shipment from the latter part of November, and a continuous supply is maturing until April.

If you are living in a district where peas may be safely grown during the winter months, we suggest that a number of neighbors agree to plant collectively enough acreage that shipments may be made in car lots. Not less than fifty acres should be planted to mature at one time. Thus a car load may be shipped at each picking.

**American Wonder** The earliest of all wrinkled peas Of dwarf habit, growing from 9 to 11 inches high, and producing a profusion of good-sized and well-filled pods of the finest flavor. (Pkt. 10c) (½ lb. 25c) (lb. 40c) postpaid; (10 lbs. \$2.75) f. o. b. here. Write for quantity price.

**Nott's Excelsior** Although a few days later than the American Wonder, the pods will average fully one-third larger, containing 6 to 8 large peas, so closely packed together that they become flattened. (Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid; (10 lbs. \$2.75) f. o. b. here. Write for quantity price.

**Yorkshire Hero** A very popular market pea in this section. Abundant cropper and excellent in quality. Height 2½ feet. (Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid; (10 lbs. \$2.75) f. o. b. here. Write for quantity price.

**Admiral** This excellent variety was introduced locally two years ago with only a limited quantity to offer. Every grower who was fortunate enough to get some was extremely pleased at his good fortune. Has dark green foliage, profusely branching vines bearing abundantly of large, well-filled pods of delicious sweet peas that mature in twelve weeks from planting. The picture is of pods grown on our trial grounds, and shows the shape and actual size of the pod. It has had two years' trial, and every gardener that once grows it wants it again. That is the best recommendation. (Pkt. 10c) (½ lb. 25c) (lb. 40c) postpaid; (10 lbs. \$2.75) f. o. b. here.

**Tall Telephone** Vines vigorous, growing about 4 feet high, with large, coarse, light-colored leaves and producing an abundance of very large pods filled with immense peas which are tender, sweet and of excellent flavor. Throughout the South and by some growers in California it is preferred to all other varieties because of the hardness of the vines and its large, well-filled pods, making it one of the best varieties to grow during the winter months for shipping. (Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid; (10 lbs. \$2.75) f. o. b. here. Write for quantity price.

**Stratagem** A favorite in the San Francisco markets. The pods are of a dark green color and remain firm several days after picking. A very strong grower; very prolific, pods of good size and well filled. Vines stand upright about 2½ feet; an excellent variety. (Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid; (10 lbs. \$2.75) f. o. b.

**Premium Gem** A dwarf variety very prolific and sweet. (Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid; (10 lbs. \$2.75) f. o. b. here. Write for quantity price.



**Gradus** The largest of all extra early varieties; medium tall, quality superior to all other varieties. (Pkt. 10c) (½ lb. 25c) (lb. 40c) prepaid; (10 lbs. \$2.75) f. o. b. here. Write for quantity price.

**Dwarf Gray Sugar** (Edible pods.) Of extraordinary yielding qualities, and unsurpassed as an edible-pod variety. (Pkt. 5c) (½ lb. 25c) (lb. 40c) prepaid.

**Sugar** (Edible pods.) Should be trained on a trellis. This variety is very prolific with large, fleshy pods. (Pkt. 5c) (½ lb. 20c) (lb. 30c) postpaid.

**The Marvel** Crop failed.

**Perfection** Crop failed.

**Superior** Crop failed.

#### A WORD ABOUT SHIPPING

An independent grower may occasionally find an out and out cash buyer for a full crop, or maybe an occasional shipment at a satisfactory price, but the dealer with a line of regular customers must have a regular dependable supply while the season lasts; therefore unless the independent shipper has produce enough to keep up a reasonable supply, he will have the choice of consigning his irregular shipments to a commission house, agreeing to accept whatever returns may be handed him, or selling them outright to large shippers whose business it is to buy up everything offered for shipment to the far East—concerns who are prepared to handle such shipments by the most economical methods and to reap the greatest profits. They can afford to pay you a cash price that will be more profitable to you, as you will believe if you will stop to figure the cost of the time, labor, equipment and bookkeeping to run an independent shipping business with an inadequate supply.

We recommend you to grow a diversity of crops of such things as may be shipped. Have something growing all the year. In August, September and October, plant cauliflower, cabbage, onions, lettuce, beets, carrots, turnips, peas, beans and potatoes. During the early spring months grow summer squash and commercial beans.

#### HOW BUSINESS GROWS

In 1903 H. L. Musser of the Aggeler & Musser Seed Company, shipped the first crate of Los Angeles Market Lettuce from Los Angeles to friends in Lancaster County, Pennsylvania. This lettuce was received in perfect condition, as were many subsequent shipments. This was reported to the local shippers who tried it as an experiment, and in 1912 the first carlot shipment was delivered at Boston without loss.

The acreage of the Los Angeles Market Lettuce as reported to the Bureau of Crop Estimates October 1917:

Imperial Valley: 1917, 413 cars; 1918 acreage nearly double the previous year.

Los Angeles Co.: 3205 acres.

Orange County: 340 acres.

Coachella Valley: 90 acres.

This acreage may easily market 4000 carloads valued at \$1.00 per crate equals \$1,200,000.

**Market.**—Before we introduced the Los Angeles Market Lettuce in 1902, the market for lettuce was limited to Southern California and outlying districts, but since the introduction of this excellent variety the home consumption of lettuce has increased far in excess of what would be accounted for by increased population and owing to the good shipping qualities of this variety it is being marketed in every large and medium sized city in the United States, and because of its excellence it has become a popular delicacy and is referred to everywhere as the Los Angeles Lettuce. Carload shipments now exceed that of any other vegetable and is grown in large acreage, as is the muskmelon. The normal selling price during the winter months used to be 40c per crate, often containing four dozen heads, but the past two seasons the price has not gone below 75c per crate, and reached as high as \$3.00 per crate.

#### LITTLE LANDERS

There is no home life so contented and happy as that of the Little Landers. These homes are in evidence everywhere in Southern California where there is easy access by street railway. The automobile is also contributing largely to the encouragement of the Little Landers. Go in any direction around Los Angeles and you will see well-kept cozy little homes on from one-half to five-acre plots. These are the "Little Landers" and many of them are making a good living on their little land.

There are many publications that may well be entitled "Helps to the Little Landers." Their pages are full of hints and information which constantly brings up new ideas that break the monotony of life and often add real dollars to the bank account.

We frequently receive inquiries asking that we recommend some publication devoted to various phases of ranch life. To such inquiries we take pleasure in making mention of the many efficient journals published in the southwest, of which we have a list prepared to answer such inquiries. Write the Dept. of Agriculture, Wash., D. C. Ask for Farmer's Bulletin No. 255, entitled "The Home Vegetable Garden."

#### SEE POTATOES--Page 55

seed yielded 150 to 175 sacks per acre.

E. D. McSweeney of Los Angeles says: I had seed from three sources; other yielded 40 to 60 sacks per acre, while with equal soil and cultivation your certified I want two carloads of your seed this year.

#### A WORD ABOUT EDIBLE POD PEAS

They originated in China. France was the first nation to accept them as a commercial commodity. In France they are grown largely for canning purposes, and are offered here in cans only as a luxury to be served at first class hotels and restaurants.

The pods, when quite young are picked, stringed and cooked as green beans. They are deliciously sweet. They are as easily cultivated as any other variety, and should be grown in every home garden.

When you are unable to decide what variety of pea to plant, write us, stating the acreage you wish to plant and where you intend to market the crop. We can often assist you to decide upon the right variety.

#### MONEY IN VEGETABLE GROWING

H. S. Hazeltine, Secretary of the California Vegetable Union, writes us that the vegetable industry of California is growing by leaps and bounds and prices have been going up accordingly. The demand exceeds the supply and the future never looked so encouraging for the vegetable grower as at the present time. Vegetable shipments from Southern California alone reached the enormous figures of 11,500 carloads (exclusive of melons) during the season of 1916-17, and he will be disappointed if the shipments do not reach 15,000 carloads during the season of 1917-1918. California possesses a world of rich soil, has an abundant supply of water for irrigation, with an ideal climate, and there are few drawbacks for vegetable growing. The growers who purchase A. & M. seeds and use the ordinary intelligence in farming can not fail to succeed.

#### GROWERS WAKE UP

All Eastern United States is Your Market

The following advertisement appeared in the New York Produce News, Oct. 14, 1917:

#### MIXED CARS

"We can arrange to include the finest Northern California Celery with carlots of assorted vegetables, as Beans, Tomatoes, Lettuce, Cabbage, Cauliflower, Beets, Turnips, Carrots and other vegetables."

(Signed) by a Los Angeles Shipper.

Shipping carlots of assorted vegetables is a comparatively recent innovation, and means to the man with a small acreage a sure outlet for his crops, which in the aggregate amounts to many thousands of dollars to the Little Landers.

When you have something to sell during the period from November 1st to May 1st, see the shipper about it.

#### COMMON SENSE TALK

Much abuse and condemnation is invested against the middle-man. We refer to the man who buys at harvest time; who even buys before the crop is planted, then when delivery is made puts it in warehouses and cold storage. This man, if fair in his dealings, is to the grower what the banker is to the merchant and he exacts no interest from the grower. He advances to the grower and exacts his interest from the consumer, and the consumer is merely paying the middle-man for taking care of and conserving the produce from harvest time until the time of consumption. Were it not for this middle-man there would be such a glut of produce at harvest time that the grower could not sell at any price it would be wasted. Then, when harvest time is past the consumer would either go hungry or pay the price of importation from some other part of the world where prices would be determined by supply and transportation.

Read in your Bible Genesis 41st Chapter, 47-57 Verses.

The warehouse men and the cold storage man are necessities, and benefit both the grower,—by giving him a fair price at harvest time,—and the consumer, by conserving the food until needed.

**READ PAGE 2.** Get acquainted with us. Read what part we have acted to bring about the present prosperity of the gardeners of the Southwest. Nearly all of the BIG THINGS in vegetables that are being shipped to the far East are varieties we have introduced.

See page devoted to the Silo.



# A & M Peppers



One Plant of Anaheim Chili

The growing of peppers in Southern California ranks in importance with cabbage, cauliflower, casabas and celery. The dried chili is being shipped East in car lots. The green chili, Pimiento and Chinese Giant are grown all the year around for the produce markets throughout the United States, and hundreds of acres of Pimiento and Chili are grown under contract with large canneries who ship the canned article to all parts of the world. The canned chili was unknown here until we introduced the Anaheim Chili and Pimiento.

Green chilis in midsummer sell for about \$20.00 per ton, bringing \$200.00 per acre. Dried chilis bring a normal price of 10c per pound, bringing the grower about \$200.00 per acre.

**Culture**—For early green peppers, sow seed in hot beds in December and January. Transplant as soon as weather and soil in your locality will permit. For main crop sow seed in February, March and April, in hot bed. Pepper seed needs the heat of a hot bed to germinate it during these months. For fall and winter crop sow seed in out-door beds well prepared, during May and June. Winter crops can be grown in places that are entirely frostless.



A. & M. Perfect Ruby King

**A & M Perfect Ruby King** Ordinarily they grow from 4 to 6 inches long by 3 to 4 inches thick. Plant is of sturdy, bushy habit, and each one produces handsome fruit. This pepper is popular because of its solid, thick meat and mild flavor. (Pkt. 10c) (oz. 40c) (¼ lb. \$2.65) (½ lb. \$4.25) (lb. \$8.00) postpaid.

## Mexican Chili

### Big Money Maker

This Chili is grown in Mexico more largely than any other, and is rapidly increasing in acreage here. It is not a rival to the Anaheim Chili or Pimiento, but is in a class by itself, on account of its extreme pungency. It is not canned, but is used almost exclusively for grinding and sold as cayenne, the trade of which is surprising. The enormous 1914 crop of Mexican Chili was sold out before the Anaheim Chili. (Pkt. 5c) (oz. 45c) (¼ lb. \$1.35) (½ lb. \$2.25) (lb. \$4.00) postpaid.



Mexican Chili  
Big Money Maker

## PIMIENTO

**MARKET**—The demand for the canned Pimiento has grown to enormous proportions. It is very profitable to grow for the canneries because the Pimiento is very prolific. When you contemplate planting the Pimiento, figure on not less than five acres.

**OUR SEED IS PURE.** Owing to the large acreage planted to Chili, the Pimiento growers who planted seed of their own growing found their peppers badly hybridized with chili, resulting in a product that was ill-shaped and pungent, therefore could not be sold on the market nor to the canner. Our seed is pure and true to type, as one large grower testified by ordering his seed from us, discarding his own. He said: "I shall hereafter depend upon you for my seed, because it is the purest I have ever planted."

This pepper was introduced by us in 1911. It has already become one of California's many staples ranking with the Anaheim Chili as a canned product. One cannery used the entire crop from 600 acres of Pimientos. This is because of its lack of pungency and its firm, thick fleshiness, which permits of its being scalded and peeled. It should be grown largely in the family garden, because it is delicious with salads or stuffed, and a healthy food to eat when ripe as you would eat an apple.

Every home garden should have a row of this Pimiento. For salad, parboil it to remove the skin. Stuffed and baked it is far superior to all other peppers. (Pkt. 10c) (oz. 60c) (¼ lb. \$2.00) (½ lb. \$3.25) (lb. \$6.00) postpaid.



The Pimiento as we imported it in 1906.

The Pimiento as we improved it.

It is now a Big Money Maker

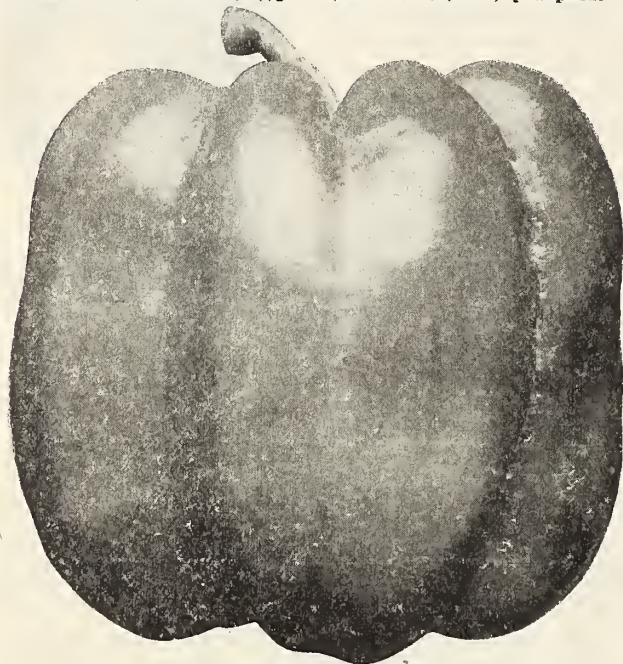
### SOMETHING NEW

**PICKLED CARROTS**—Stew Carrots until soft; make a syrup as follows: 2 cups brown sugar, ¾ cup vinegar; ¾ cup water; add mixed spices. Put into this syrup and cook until the juice has permeated them thoroughly; add a little salt. Carrots prepared in this way compare favorably with spiced peaches. Large carrots should be quartered, but the small ones usually discarded when thinned out, are just the proper size. They are not only delicious to eat, but decorative as well.



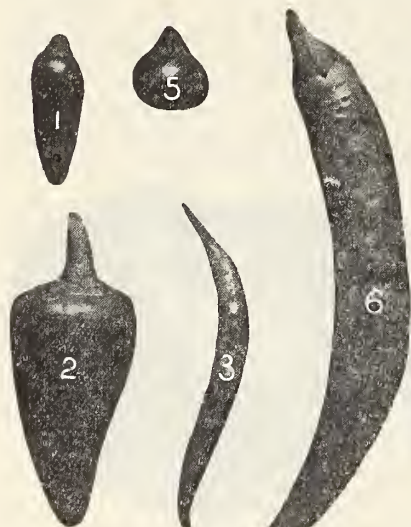
## A &amp; M PEPPERS—(Continued)

**Chinese Giant** A very large pepper of the Bull Nose type, often growing to five inches in diameter. This is the variety grown so extensively in frostless sections for the winter trade, when the grower gets as much as 20c per pound for the green pepper. One grower claims that his returns from five acre was \$4500. (Pkt. 10c) (oz. \$1.00) (¼ lb. \$3.00) (½ lb. \$5.00) (lb. \$9.00) postpaid.



Chinese Giant Pepper

**MARKET**—For the market gardener the Chinese Giant is the big money-maker. There are instances,—in the foot-hill sections where they can be grown throughout the winter,—where the grower sold \$900.00 worth from one acre, but as a mid-summer crop it is profitable because of its enormous production.



- 1 Tobasco  
2 Floral Gem  
3 Small Chili  
4 Chili Piquin  
5 Cayenne  
6 Bull Nose

**Chili Piquin** (See No. 5)—Very Pungent. (Pkt. 5c) (oz. 50c).  
**Cherry**—Round as a cherry and a trifle larger. It is very pungent. (Pkt. 5c) (oz. 50c).

## READ

The Pepper has only recently become a great factor in the commercial world. There are several distinct types which have their different uses and should not be confused by the general term, as Pepper or Chili or Pimiento.

One class comprises the Bull-nose, Chinese Giant, Ruby King, and such mild varieties used chiefly when green for salads and as stuffed peppers.

## Small Chili

A very short heavy-set bush, almost a solid cluster of small peppers of 2 inches in length. (Pkt. 5c) (oz. 50c) postpaid.

## Cayenne

A long, slim pepper, rather pointed, and when ripe a bright red color. Extremely pungent. (Pkt. 5c) (oz. 50c) postpaid.

## Tobasco

The plants develop into large bushes, bearing profusely the little bright peppers in sprays. A mature pepper measures about one inch in length. These peppers are extremely pungent. (Pkt. 10c) (oz. 50c) postpaid.

## Floral Gem

A small hot pepper used for pickling or as a pot herb. (Pkt. 5c) (oz. 50c) postpaid.

Anaheim Chili  
Big Money Maker

## Anaheim Chili Pepper

The Popularity of this Pepper continues to grow enormously. A few years ago known only to growers in Orange County, where it originated, it is now a staple article of commerce, superseding the extremely pungent Black Mexican pepper so popular in Old Mexico. Our sales of Anaheim Chili seed in Arizona, New Mexico, Texas and Old Mexico have been surprisingly large. The seed we have was procured from selected peppers, and not one pod was less than seven inches long. We grow the peppers, and have the seed taken out on our own grounds, under our supervision. It is 100 per cent pure. It is a safe crop to plant; it is not perishable. The price is rarely less than ten cents per pound dried, and often double that figure.

The market for green chilis, too, is enormous, because of the large demand of the canneries who used the product of several hundred acres last season, and this industry is only in its infancy. The Anaheim Chili is desired above all others by the canner because of its fleshiness and slight pungency. Canned Chili was unheard of until we introduced the thick-meated Anaheim Chili. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.75) (½ lb. \$2.75) (lb. \$5.00).

There was such an enormous over-production in 1914 that the sale of chili was not a matter of price, but simply no demand equal to the supply. This has resulted in great good to the industry, because growers and dealers alike sought new markets and carloads of dried chili were shipped to cities that never before used them, with the result that the 1916 crop was sold out before the 1917 crop was harvested. The 1917 crop is already sold out. Therefore 1918 should be a banner year.

The average production per acre of green chilis is 10 tons per acre, valued at \$20.00 per ton, or one ton of dried chili seldom selling below 10 cents per pound. This is a nice side issue for the man with a small acreage if he need not hire labor.

The supply of Anaheim and Mexico Chili has not kept up with the market for two years, and there is no danger of over-production in 1918. The market is bare and the demand has doubled within two years. We recommend a big planting of Chili, both Anaheim and Mexican.

## The American Paprika

The hottest pepper that grows if it is stringency you are after, plant this Paprika. It is used extensively for culinary purposes under the name Paprika. It is in a class by itself. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.25) postpaid.

## Bell or Bull Nose

Do not confuse this with the Chinese Giant. The Bell Pepper is similar in shape to the Chinese Giant. The Bell Pepper is but less than one-half as large, and on this account the gardener intending to sell his crop, should not plant it, particularly to grow for the winter trade. We recommend it highly for the home garden. (Pkt. 5c) (oz. 65c) (¼ lb. \$2.00) (½ lb. \$3.25) (lb. \$6.00) postpaid.

Another class comprising the Pimiento, a mild pepper used almost exclusively for canning.

The Anaheim Chili, used more widely than any other, as it is not mild or too stringent and is, therefore, used green for cooking and canning, and also dried for grinding and used as a spice.

The other class used exclusively for spicing comprises a large list of hot peppers of which the Black Mexican is the leading variety.



# Potatoes

READ THIS ARTICLE Written for this Catalog by Prof. W. V. Shear, State Horticultural Inspector.

## Essential Factors in Successful Potato Growing

The best results cannot be obtained without the best seed. Over thirty per cent increase has been obtained through the use of our certified seed when grown by the side of what was thought to be extra good seed stock from other fields.

Plow deeply, 9 to 12 inches, except on very light sandy soils.

Treat seed stock before cutting. The very best seed may have traces of one or more of the many diseases to which potatoes are subject. It is, therefore, advisable to soak seed potatoes in a solution which will kill whatever disease may be lurking on the outside of the tubers. Make this solution by dissolving four ounces of corrosive sublimate in about two quarts of hot water (be sure it is thoroughly dissolved) in a glass jar and then add to thirty gallons of cold water in wooden vessels. A barrel or wooden tank makes a good receptacle for this purpose. Place the sacks of potatoes in this solution and leave one and one-half hours, then drain and, if the potatoes are not to be cut immediately spread out to dry. Use the same solution for only four or five lots as the strength becomes weaker the more it is used. This solution is poisonous and should be handled with care and kept where animals may not drink it. Treated potatoes should also be kept away from stock.

Cut potatoes to about two eyes and about two ounce pieces.

Plant four to five inches deep, 14 inches between pieces, in rows 40 inches apart.

If potatoes follow alfalfa good yields can usually be obtained without the use of commercial fertilizer; but on most soils the use of barnyard manure thoroughly worked into the soil, or commercial fertilizer will be found profitable.

Keep soil moist at all times. Do not judge moisture supply by appearance of the potato plants as when the plants become a very dark green or begin to turn yellow it is then too late to apply water for best results; and potatoes are likely to become rough and knobby.

Turn earth up toward plants a little higher at each cultivation; until at last cultivation the ridges are six to ten inches high and broad at top so that tubers will be kept cool and free from tuber moth infection.

We advise using corrosive sublimate, Formaldehyde is not strong enough to destroy Rhysoctonia. As evidence that the treatment produces results, we quote Mr. Crew, of Riverside County, who says:

"It was quite easy to distinguish in the field where the treated seed grew, both in the vines while growing, and in the yield and quality of the potatoes. Of course, I manured heavily, but I harvested above an average of 200 sacks per acre on all of my 80 acres, and some spots yielded nearly 300 sacks per acre, and all clean, certified seed, which must be attributed to treating the seed, and proper cultivation."

**POTATO INSPECTION**—All potatoes intended for seed purposes must be inspected by the County Horticultural authorities before they may be received and again before they may be shipped out. This is a great protection to the grower.

We have grown under Prof. Shear's supervision several carloads of White Rose and Triumph potatoes, certified by him. This seed is now (January, 1918), in our warehouse, ready for immediate planting. Our imported Northern grown seed is practically free from scab or other diseases and does not need treating, but unless our local grown potatoes are treated for scab, you are sure to harvest an inferior quality of potatoes.

## Certified Seed, What it Means

Owing to the enormous decline of the yield of potatoes to one-fifth that of five years ago, the Agricultural schools of California have given special study to this subject, and have held conventions throughout the state, giving lectures of instruction to farmers. This is a good work, and will result in much improvement. The State Legislature enacted a bill (No. 1573) entitled "an act to establish a standard for California certified seed potatoes, making a violation of this act a misdemeanor." Certified seed means that at the request of the grower, an official of the state will inspect the crop three times—first during the blossom season, second just before maturing, and third after they have been harvested. If pure to type and free from disease, the grower will be given a certificate for each sack, and the potatoes may be sold as certified seed.

## Early White Rose

The greatest of all our Big Money-Makers.

This is the potato which stands out conspicuously among all other varieties as an all-round, uniformly good yielder in any kind of soil, any season,—early, mid-summer or late. Always the best for main crops and for the table.

## Oregon Grown White Rose

Determined that our growers shall have the best it is possible to obtain, we sent a carload of our best White Rose Potatoes, carefully hand-sorted under the supervision of our local Horticultural Inspectors and again at Oregon. From this stock we now have several carloads of positively first-class seed.

Our Oregon grower says, "They are so superior to other varieties that I will now grow no other but the White Rose."

**Caution**—They have a potato in Oregon which goes by the name of Oregon White Rose. A potato expert says it is the British Queen, a good potato but a late variety, it is almost a round potato and is easily distinguished from the typical White Rose shown in the picture. Therefore, it will be your own fault if you allow yourself to be deceived after reading this caution.

## Bliss's Triumph

This is a round red potato, is not a big yielder, but is the earliest potato we know of. It gets entirely ripe in nine weeks. The potatoes produced are always good size and are of exceptionally good quality. They have proven the most satisfactory for the desert country, where moisture is scarce and a quick crop is necessary. They make small tops and the potatoes form very close together, hence they can be planted a foot apart in the rows and have room enough.

## American Wonder

This is a very popular early variety in the Southwest. It is a long white potato resembling the Burbank. It gets entirely ripe in three months. On good land they make an enormous yield of fine potatoes of excellent quality. They set from fifteen to twenty-five potatoes to the hill, and it is not advisable to plant them on very poor land, as you will have too many small potatoes.

## Early Red Rose

This is a long red potato about ten days later than the American Wonder. It is very desirable for selling in lug boxes on the early market and is better for poor land than American Wonder.

## Irish Cobler

The most popular extra early potato in the far East. One large grower in the Sacramento Valley declares it is the Big Money Maker for California. Always on the lookout for something better than that which we have we are now offering this variety for the first time. Its popularity in the East recommends it to you as a first early money maker.

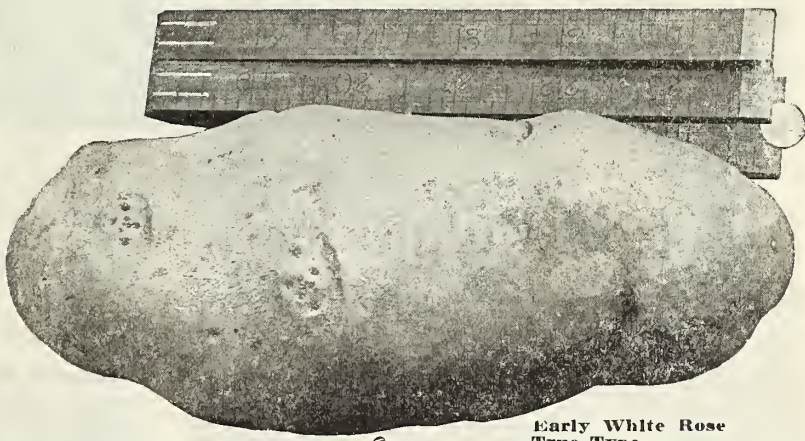
## Burbank

This is the best late variety, fully a month later than the White Rose. It sets heavily and yields a big crop on good land. We do not recommend them on poor land, as they make too many small potatoes.

**OUR CERTIFIED SEED:** For two years we have had a limited amount of certified seed. This seed has proven its worth over seed which had not been certified by the increased yield of large clean potatoes. We have numerous testimonials stating the good results from fields planted to certified seed, by the side of fields planted to seed which was not certified. Therefore, with this encouragement we have entered into a growing contract with two expert growers who have incorporated themselves into a company, the sole purpose of which will be to grow certified seed for us exclusively, any variety we wish.

Our first contract with this company is to grow fifty carloads for 1918 delivery.

The price of certified seed potatoes is only \$1.00 per 100 lbs. higher than the price of the same grade of seed that has not been certified. It is well worth it. Write for quantity prices on all varieties.



Early White Rose  
True Type



## A & M Sweet Potatoes

The handling of Sweet Potatoes for seed purposes has been unsatisfactory to our customers as well as to ourselves, on account of the perishable nature of the small Sweet Potato. We have decided to list only plants of which we will have a large supply, at lowest market price.

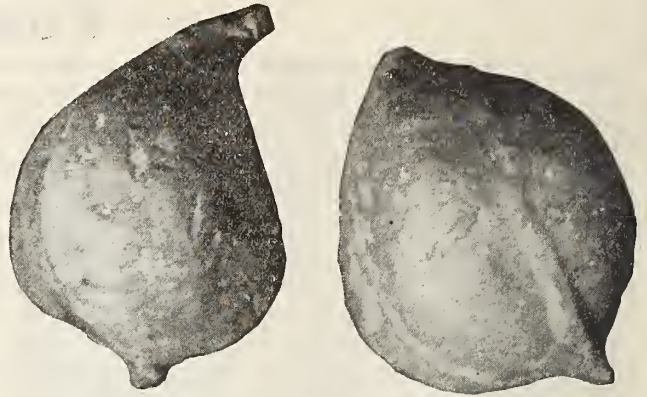
However, if you wish us to secure sweet potatoes for seed purposes we will do so at your risk; check or cash must always accompany the order, either for Sweet Potatoes or plants, no matter what your financial standing is.

### SWEET POTATO PLANTS

We will have in large quantities plants of the Yellow Jersey, Large White, and Red Jersey. Price (Per 100, 75¢ postpaid) (Per 1000, \$4.00 f. o. b. here.)

Also, small quantities of the Georgia Yam and the Porto Rico Yam. (Per 50 plants, 60¢) (100 plants, \$1.00) postpaid. We have no seed of the Yams to offer.

**A word about the Porto Rico Yams:**—Our grower in Georgia says the Porto Rico Yams are much superior to Sweet Potatoes. The Yam on the Atlanta market sells for \$2.00 per box, while Sweet Potatoes go begging at \$1.25 per box.



Porto Rico Yam

There is surely a good profit awaiting the grower who will cater to the local demand for the Yam. The consumption may not be general but with the great population of this city, the market for the Yam will prove to be no small item.



Large Cheese or Kentucky Field

The seeds you buy were taken from the pumpkins shown in this picture.

## A & M Pumpkins

For stock only, plant Mammoth Tours, California Mammoth, Estampes, Cushaw, Kentucky Field or Cheese, Sandwich Island, Pot Iron and Connecticut Field.

For the canneries, plant Estampes, Kentucky Field or Cheese, also Boston Marrow and Hubbard Squash.

For the home, plant Boston Pie, Seminole and Hubbard Squash.

**Culture**—Pumpkins delight in red, sandy soil that is perpetually moist,—the soil that retains moisture by the dry farming method, because pumpkins do not want too much water, and to flood them would destroy them, so when irrigating make the furrows nearly as far from the hill as the tip of the vine, and when the vines intersect, run the water through the middle of the row. Plant the seeds every 8 or 10 feet, allowing only one plant to remain.

See Page 39—Deep Planting.

**Estampes** We have the purest stock seed from which to grow this pumpkin. It is the heaviest pumpkin for its size that we know of; 100 pounds is not an unusual size for them to attain. It is the canner's favorite because of its thick, deep red flesh and the fine sweet flavor. It is without exception the best for dairy stock, and only the scarcity of the seed has prevented it from being more widely known. (Pkt. 5¢) (¼ lb. 50¢) (½ lb. 80¢) (lb. \$1.50) postpaid.

The Estampes Pumpkin, weighing 131 lbs., was grown on the ranch of Mr. Hathaway. His boys are active intelligent farmers and dairymen, and give us the information that when they feed other pumpkins the cows just eat them because they have too, and the milk contains only 3% butter-fat, but when they feed the Estampes, the cows are just crazy to get at them, and the milk contains 5% butter-fat. "Just to try it out, we again fed other pumpkins and the butter-fat fell to 3%."

### Kentucky Field or Large Cheese

This variety is locally called Sweet Pumpkin, and is grown more than any other of its kind for stock, because it is a good keeper, notwithstanding it has a soft shell. It is fleshy and very sweet; also very good for pie, and is largely used for canning. On one large ranch in the San Fernando Valley there was planted a large acreage to nearly all the popular varieties; this one was unaffected by the hot sun, and remained in perfect condition while other varieties were sun-burned and decayed quickly. (Pkt. 5¢) (¼ lb. 25¢) (½ lb. 40¢) (lb. 75¢) postpaid.

**Sandwich Island** The most popular pumpkin in Ventura County. It is as hardy as a citron. A good one to plant where water is scarce. (Pkt. 5¢) (¼ lb. 35¢) (½ lb. 60¢) (lb. \$1.00) postpaid.

**Mammoth Tours** Is one of our best stock pumpkins, and a most prolific yielder on good soil. It produces a pumpkin at every other joint that will average fifty pounds, more or less, according to the richness of the soil. It is a very popular pumpkin where it is better known. Mr. Short, of the San Fernando Valley, says: "There is simply nothing like it for bearing." Mr. Richardson, of the San Gabriel Valley, says about the same. (Pkt. 5¢) (¼ lb. 50¢) (½ lb. 85¢) (lb. \$1.50) postpaid.

**Cushaw or Crookneck** This excellent pumpkin ought to be planted more largely. It is the heaviest pumpkin for its size because of the small seed cavity. It is excellent for pies, and yields enormously. (Pkt. 5¢) (¼ lb. 35¢) (½ lb. 60¢) (lb. \$1.00) postpaid.

**Japanese Pie Pumpkin** (Pkt. 5¢) (oz. 10¢) (¼ lb. 35¢) (lb. \$1.00) postpaid.

### California Mammoth

This is the large pumpkin so well known locally. As many as 20 tons have been taken from one acre. It not infrequently attains a weight of 200 pounds. (Pkt. 5¢) (¼ lb. 50¢) (½ lb. 85¢) (lb. \$1.50) postpaid.



California Mammoth

**Sugar or Boston Pie** A small handsome variety, and very popular. The skin is a deep orange yellow; flesh fine grained and sweet in taste. Famous in Boston as a pie pumpkin. It sells better on our local market than any other variety, except the Jack o' Lantern at Hallowe'en time. (Pkt. 5¢) (¼ lb. 35¢) (½ lb. 60¢) (lb. \$1.00) postpaid.

**Connecticut Field** (The Jack-o'-Lantern)—This is the pumpkin planted largely for the Hallowe'en and Thanksgiving trade, at which time they bring \$20.00 per ton, and two cents per pound at retail stores. Twenty tons to the acre is no unusual yield. If the land has been manured liberally a full crop can be grown among corn. It is a most excellent keeper, and will be sure wealth to all who grow and feed it liberally. (Pkt. 5¢) (¼ lb. 35¢) (½ lb. 50¢) (lb. 85¢) postpaid.



# A & M Radish



Long White Icicle

## Early Long Scarlet

Very brittle and crisp; color a bright scarlet; small top. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

## Long Black Spanish

A delicious, crisp winter radish. It sells well at the market. (Pkt. 5c) (oz. 10c) (¼ lb. 25c) (½ lb. 40c) (lb. 75c) postpaid.

## Large White Chinese Stump Rooted

This is a winter radish of deliciously sweet flavor; can be eaten as a turnip as it is without stringency. The Chinese use this variety exclusively. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

## Half Long Scarlet

This variety should be more popular because it is just the right size for table use, not too large, never pithy, but always crisp and sweet. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

**Mixed Radish** This mixture, consisting of almost every known variety of radish, is deservedly popular throughout the country because it grows radishes suitable to each season and to every condition of soil. You are sure to have them early, medium and late; small, medium and large—something all the time. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

**A WORD ABOUT RADISHES**—Few people realize how easily radishes can be grown and how healthful they are. A piece of ground three feet square or a strip here and there about the garden can by proper selection of seed, continuous planting and cultivation, grow more than enough for the family.

**Culture**—Seed may be sown the year round in California. Radishes thrive best in light, sandy loam, made rich with manure. Sow in drills, 10 inches apart. An ounce of seed will sow a hundred feet of drill, 10 pounds to the acre.

## Early Scarlet Turnip

One of the earliest and best sorts for forcing; its color is very handsome; flavor very mild, crisp and juicy; stands a great amount of heat without becoming pithy. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

## French Breakfast

A splendid variety, medium-sized, olive-shaped, very crisp and tender; of a beautiful scarlet color. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

## White Tipped Scarlet Turnip

An early variety of medium size and excellent flavor, and of a very handsome appearance. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

## Epicure Radish

Ready for the table within three weeks; always crisp, a delightful relish. The small round red and white radishes make a pretty showing. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.

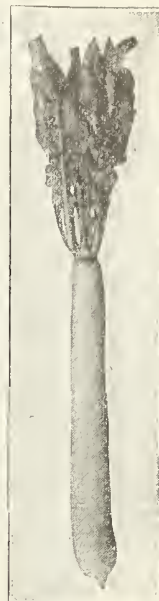
**Chartiers** A distinct, exceedingly handsome and attractive sort; color of top is scarlet rose, shading into pure waxy white at the tip. Attains a large size before it becomes unfit for the table. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.



China Rose



Scarlet Turnip White Tip Radish



All Season

## Long White Icicle

For the home garden we consider this a most excellent table variety. Its extreme earliness, beautiful pure white appearance, excellent flavor and crispness should make it a favorite everywhere. (Pkt. 5c) (oz. 10c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

## Crimson Giant Turnip

A variety extraordinary in that, while growing to an unusually large size, it is always tender, crisp and of mild flavor. It remains in perfect condition a remarkably long time, and, unlike other forcing varieties, does not become pithy even when twice their size in diameter; root turnip shaped; color a beautiful crimson carmine; flesh firm, crisp and tender. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

## All Season Radish

A new one from Japan called "Tokishiraza," meaning all-the-year. It is a very large, long, snow-white radish; deeply rooted, does not extend above the soil, hence it always is tender and crisp and has a delicious flavor. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.

## Japanese Summer Radish

This radish was introduced here by the Japanese several years ago. Its beautiful white color and mammoth size attracts great attention. It is very tender and the flavor is excellent and mild. It attains perfection in California, growing twenty-six inches in length and three inches in diameter. It is a profitable radish to grow, as it sells readily and is relished by all. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.

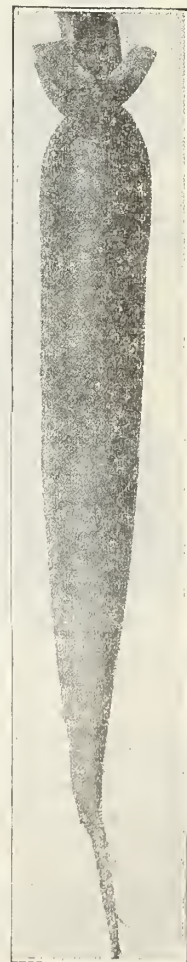
## California Mammoth

Pure white; the flesh is tender, sweet and crisp, keeps well. Plant from September 1st to March. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

## Round Black Spanish

Skin black, flesh white, of firm texture. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

**China Rose** A delicious radish, crisp, with little tendency to become pithy. A beautiful coloring from light red at the top to almost pure white at the tip. It is a good seller and is in great demand by the vegetable peddlers. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.



Chartier



# Horseradish

GROW MORE HORSERADISH

Big Money Maker

The local supply is far below the demand. This condition should not exist, because it is a profitable crop. One grower realized \$1100.00 off of two acres. When asked why he discontinued growing it, he replied: "I have not the right soil. It requires a rich, sandy loam, frequent irrigation, but it must be well drained so that the soil does not remain muddy or sour. Then, too, there is so much disease or blight prevalent that one must get a clean start and keep clean by changing places as soon as the soil is infected."

One dozen will supply enough for the use of one family. It requires about 10,000 roots to plant an acre.

Prepare the ground as you would for potatoes; stick each root upright into the bottom of the furrow 12 inches apart, and 3 inches deep, or drop the roots and cover as potatoes.



**The Bohemian** Variety is decidedly a more rapid grower than the common. We buy our roots from the far East to avoid the disease so prevalent here. (12 roots 25c) (100 roots \$1.00) postpaid; (1000 roots \$8.00) f. o. b. here.

Vegetable Plants and Roots, See Page 11

# A & M Roselle



Roselle Pods  
From Which Jelly is Made

and useful plant. (Pkt, 10c) (oz. 80c) (¼ lb. \$2.50) (½ lb. \$4.00) (lb. \$7.50) postpaid.

**NOTE**—Our local growers are not up with other localities in advertising and educating the public to the uses of roselle. One grower in Texas has thirty-five acres. The local demand has never yet been fully supplied, and only a few people ever heard of it. Someone ought to get busy.

We have been advised by a lady from Texas, also one from Cuba, to remove the seed pod, and the jelly is thus greatly improved. The calyx is an excellent substitute for cranberry sauce or pie.

Having received numerous inquiries how to use Roselle, we have decided to insert the answer here. Pick the pods that grow at the axil of each leaf. Boil them until soft and strain through a cloth. Add ½ pint of sugar and the juice of ¼ of a lemon to each pint of juice, and boil again until it jells.

The pods are ready for use in September. We are advised that excellent jelly may be made from the leaves. Therefore it will not be necessary to wait for the pods to mature.

**Culture** — Sow seed early in April in the field, four feet apart, in rows six feet apart. Cultivate as Okra. There is an early and a late Roselle. Be sure to get the early variety because the frost is almost sure to destroy the late variety before it matures. We offer only the early variety.

Is an annual plant that has been sufficiently tested to indicate its great value and to warrant more extended cultivation. The fruit is used for making jelly and jam. The jelly is superior to guava or currant, and is labeled as "Queensland Jelly." is shipped from Australia to all parts of Europe. It is easily grown from seed if planted after the ground is warm; grows rapidly, resists drouth and is very ornamental. Every home garden should have a row of this ornamental

# A & M Rhubarb

**Culture**—Sow the seed any time from February 1st until July 1st, in drills two feet apart, in order that you may cultivate with a horse cultivator. Within five months after sowing the seed, the Wagner's Giant variety will be large enough to market, even though the roots are not larger than your thumb. Transplant at any time when the roots are large enough. Rhubarb requires a rich sandy loam, well drained. Never flood the crown nor bury it with soil. Therefore plant it on ridges or on the sides of an irrigating ditch. In our hot climate partial shading is beneficial. If you can do so, plant it in an orchard, setting the roots three feet apart, but if in a sunny place, set the roots 18 inches apart, that the leaves of one plant will shade the crown of another.

The largest rhubarb ever brought to this market was grown by the side of an irrigating ditch on the peat lands of the West Adams Street Gardens.

**Wagner's Giant** variety is undoubtedly the most profitable variety we have yet offered. It is displayed at the market places in apple boxes, and the boxes are barely long enough to accommodate the large, thick stems that will average one-half pound each, often weighing more than a pound. It is remarkably early, bearing large stems within five months from planting the seed, and grows nearly the entire year. The stems are so tender that they do not need peeling. It is not as red as the Winter Crimson, but of good color. (Pkt, 20c) (oz. \$1.35) (¼ lb. \$4.00) (½ lb. \$6.50) (lb. \$12.00) postpaid.

**READ THIS TESTIMONIAL**—"I have very successfully grown Wagner's Giant Rhubarb from the seed for the last three years. At present the plants are in fine shape with lots of edible stems and has been plucked all summer, while my summer varieties are all dormant.—Mrs. H. M. Hoge, Monterey Co., Cal."



On Both Sides of an Irrigating Ditch

**Winter Crimson** This variety is a favorite because of its hardiness and excellent flavor. While the stems grow to desired length, they are rarely thicker than the thumb. It is desirable for the home garden, where good table quality is first considered. (Pkt, 10c) (oz. 80c) (¼ lb. \$2.50) (½ lb. \$4.25) (lb. \$8.00) postpaid

## RHUBARB ROOTS

**Wagner's Giant Seedling**—(15c each) (\$1.00 per dozen) postpaid. For Plants see page 11.

**Truck Farmers Near Town Have Big Advantage in Retailing**

Since the establishment of municipal markets in various parts of the city and a free license to the producer, the small farmer living on a good road, within 25 miles of the city can build up a profitable trade for all he can produce of fresh vegetable, fruits, poultry and dairy products. The road to success depends largely upon the ability of the grower to furnish a good article in season, give honest measure and to have polite, obliging manners. Politeness, honesty and quality of produce go a long way in making and holding trade. Any one accustomed to eating freshly gathered vegetables will readily give an extra price for such. Remember no license is required to peddle.

## READ

We have been desirous of making this catalog both interesting and instructive, and to do this requires much space. To enlarge the book only a few pages would add \$1000.00 to our expense account in postage. We have, therefore, elected to use smaller type whereby we can include nearly double the amount of beneficial reading. Much of the information compiled in this catalog is compiled from reports of the ranchers who have good results from our seed. We encourage these reports and request that with these reports some explanation be given as to the methods and conditions by which such results are attained. This information will often prove beneficial to others who read this catalog that they, too, may get better results.



# A & M Salsify



Salsify

Culture—Sow the seed in the spring in drills one foot apart and one inch deep, thinning out plants to four inches. It succeeds best in light, well-enriched soil. One ounce of seed for 50 feet of drill.

**Long White** Favorite market variety and the best flavored. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.60) (lb. \$3.00) postpaid.

## Mammoth Sandwich Island

A large and superior variety. Mild and delicately flavored. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) (½ lb. \$1.60) (lb. \$3.00) postpaid.

# A & M Sorrel

**Broad Leaved** This is boiled and served like spinach, also delicious soup is made with it, and it possesses a very fine flavor. As the hot sun tends to increase its acidity, a northern exposure is advisable. It should be sown in drills 18 inches apart. It is hardy but the roots should be divided every four years. (Pkt. 10c) (oz. 20c) (¼ lb. 50c) (lb. \$1.75) postpaid.

# A & M Squash

## WINTER VARIETIES

Culture—Seed should not be planted until all danger of frost is past. In open ground plant in hills ten feet apart where irrigated, and fifteen feet apart where not irrigated. In orchard, plant only one row between trees. When the vine is well along, do not flood the hill, but keep the irrigation furrow nearly as far from the hill as the length of the vine. Keep in mind that the roots are longer than the vines.



Green Warty Hubbard

**Green Warty Hubbard** This variety is grown more largely probably throughout the United States than any other. It is used in many ways, but mostly for pies. It is a good keeper and because of its hard, warty rind, it is the best of shippers. Therefore many acres are grown in Southern California for that purpose, and many more for the Bakers, the Cannerymen, and family consumption. When in doubt what to plant for a fall crop, plant Hubbard Squash if your soil is suitable. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.

The Banana and English Cream Marrow have made great strides in the commercial world. They are yet far behind the Hubbard, but they have the merit; the flavor and the keeping qualities that win. The grower who will plant largely of these varieties will not regret it.



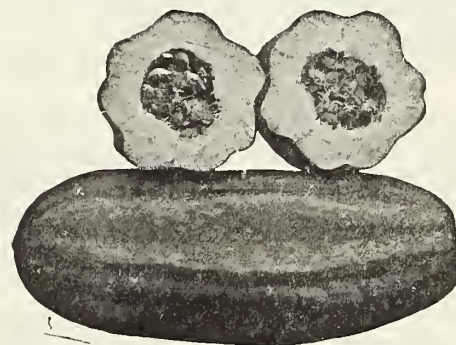
Banana

**Banana** The squash grows from one to two feet in length. The skin varies from a bright yellow to a dark olive green. Flesh firm and solid, of beautiful orange-yellow and excellent quality. Mr. E. L. Van Ripper says it is the sweetest of all squashes and

wishes everyone to try it. It keeps from one season until another. When quite young it is excellent to cook as a marrow. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

**Fordhook Squash** This is a most desirable squash for either summer or winter use. The vines are of strong, vigorous growth and wonderfully productive. Squash oblong in form, eight to ten inches in length, slightly ridged; smooth, thin, yellowish skin; flesh very thick and of a light yellow color. If gathered young for cooking, no other squash approaches it in flavor, while if allowed to ripen on the vine they can be stored and will keep in excellent condition until late the following June. Either for baking like sweet potatoes or making pies during the winter, the quality is very fine. (Pkt. 5c) (oz. 20c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

## English Cream Marrow



English Cream Marrow

It is as sweet as a sweet potato, and has none of that pumpkin flavor. It is good any way it comes on the table, and is better than Hubbard Squash for pie. It is 6 to 8 inches long and half as thick (See picture.) Decidedly firm, it will keep from one season to another. (Pkt. 5c) (oz. 15c) (¼ lb. 50c) (½ lb. 80c) (lb. \$1.50) postpaid.

**Golden Hubbard** The flesh is of a deep golden yellow—low—a much richer color than the Hubbard—fine grained, cooks very dry, and has excellent flavor. In its keeping qualities it is fully equal to the green variety. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.

## Acorn

Every home garden should have a few hills of this delicious squash. For table use or for pies it is unsurpassed, uniform in shape and bright red color which makes it a desirable ornament for the table.

Receipt—Remove the blossom end, take out all the seed, and bake in an oven. When baked, remove the edible portion, season and serve in the shell. In this way it looks like a huge acorn, and is quite ornamental. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.



Acorn Squash

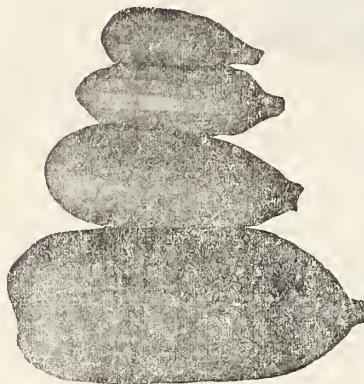
**Pike's Peak or Sibley** An excellent winter squash. Fine grained and superior in flavor and keeping qualities to the Hubbard squash, but not so well known. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.

**Boston Marrow** Fresh, bright orange or rich salmon color; for sweetness and excellence is unsurpassed. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) postpaid.

**MONEY IN GROWING SQUASH AND PUMPKINS.**—The canners consume enormous quantities. They use principally the Estampes and Large Cheese pumpkins, paying about \$4.00 per ton. Next to the canners are the bakers, who use Hubbard Squash and Small Sugar, paying about \$20.00 to \$30.00 per ton.



## A & M Summer Squash



Italian Squash

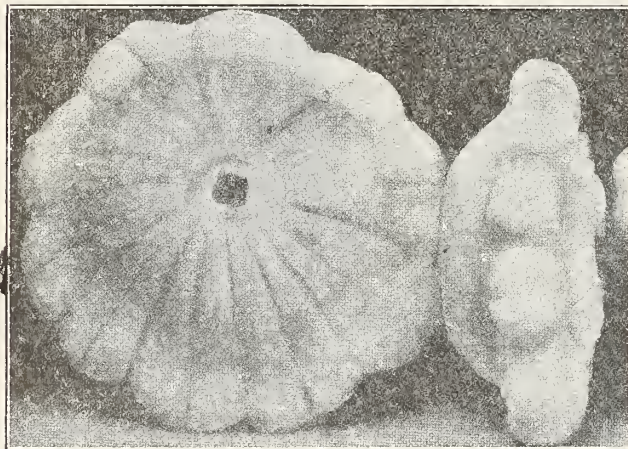
on the market. It is listed with the daily market reports, and is grown largely by the gardeners in frostless sections for the early trade. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.

**Golden Summer Crookneck** The popular well known Crookneck. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.



Summer Crookneck

As will be seen by the picture, this squash is similar to the well known White Bush Scallop, but it is more elongated toward the blossom, which makes it more desirable from the gardener's point of view. It looks better and sells more readily. It is very prolific. (Pkt. 5c) (oz. 15c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) postpaid.



A. & M. Improved White Bush Scallop

**Yellow Bush Scallop** Similar to the White Bush Scallop in all respects except the color is yellow and claimed by some to have a better flavor. (Pkt. 5c) (oz. 15c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) postpaid.

### Cocozelle

An excellent squash for many purposes. Equal to the White Bush Scallop for the table when taken quite young. It is enormously prolific. When gathered closely and fed to stock, the vines will keep bearing continuously all summer, and far into the fall. It survives drought to a wonderful degree. (Pkt. 5c) (oz. 15c) (¼ lb. 40c) (½ lb. 75c) (lb. \$1.25) postpaid.



Cocozelle

## A & M Spinach

**MARKET**—On the local market there is a uniform demand throughout the year for home consumption, but during the winter months the shipper requires enormous quantities. The canners contract for large acreage each year.

**Culture**—Sow in drills, one foot apart, and for succession every two weeks; as it grows, thin out for use, keeping clear of weeds. It grows the year round in California. One ounce of seed for 100 feet of drill; 20 pounds to an acre.

**A & M Summer Success** For several years we have endeavored to secure a type of Spinach that would prove profitable to grow in summer time, and after several trials this one proved the greatest success. With moist, loamy or peat land the A. & M. Summer Success will grow leaves 14 inches long. The leaves are very meaty and crisp. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. \$1.60) (lb. \$2.25) postpaid.

### Prickley Seeded, or Winter Spinach

This variety thrives best in the coldest weather, and is the money-maker for the market gardener. Our seed is now American grown, and for several years has given entire satisfaction. The leaves are large, fleshy and very tender. (Pkt. 5c) (oz. 10c) (½ lb. 60c) (lb. \$1.00) postpaid.

**Round Summer** Leaves thick and fleshy, not as large as the winter variety, but better for summer growing in damp land. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. \$1.60) (lb. \$2.25) postpaid.



Bloomsdale

A. & M. Thick-leaved Winter

### A & M Improved Thick-Leaf Winter

Crop failed. New crop ready August 1918.

**Long Standing** This is a good sort for market gardeners because it is slow to shoot to seed, and the quality is equal to the best winter variety. (Pkt. 5c) (oz. 25c) (¼ lb. 75c) (½ lb. \$1.60) (lb. \$2.25) postpaid.

**Bloomsdale** Large green thick savory crumpled leaves grow luxuriantly, producing twelve to fifteen tons per acre. Throughout the East and South, this variety is used more extensively than any other. Try it here. (Pkt. 5c) (oz. 10c) (¼ lb. 35c) (½ lb. 60c) (lb. \$1.00) postpaid.

**New Zealand** A spreading vine with numerous branches. One plant will cover an area four feet in diameter. The tender tips may be cut every few days and cooked as spinach; it is just as good. One pkt. is enough for a family garden. (Pkt. 10c).

### A WORD ABOUT SUMMER SQUASH

In foothill sections where there is little likelihood of late frosts, plant the seed in February, selecting our Improved White Bush Scallop and Italian. These are the earliest and best varieties, as well as the most prolific.

Plant again in September for late fall crop. From \$400.00 to \$600.00 per acre is realized.

### A WORD ABOUT SPINACH

Few people realize the enormous acreage planted each year to spinach, throughout the United States, and the importance attached to it as a health preserving food. Several thousand acres are grown each year for canners, and thousands of acres are grown in the South during the winter months and shipped to the Northern cities.

It may be found on the Los Angeles Market each day throughout the year, as it is hardy enough to endure our lowest temperature, and with proper cultivation it endures the heat of our summers.

All varieties of Spinach seed are exceedingly scarce, so scarce indeed that variety is not considered, just so it is Spinach.



# A & M Tomatoes

For Plants See Page 16

**Culture**—Tomatoes do best on light warm, not over-rich soil, and success depends upon securing a rapid, vigorous and unchecked growth during the early part of the season. Sow in hot-beds from 6 to 8 weeks before they can be set out of doors, which is when danger from frost is past.

Transplant three to six feet apart in rows four to six feet apart, according to the variety,—three feet for those varieties of upright growth, as the Dwarf Champion, and six feet is not too far apart for vining varieties which will soon cover the ground solidly. The soil should be plowed and pulverized to a depth of ten or twelve inches, the deeper the better, in order that the roots may keep in the cool earth, for as soon as the roots are over-heated by the hot dry soil near the surface, the plant quickly sickens and dies, and the grower can see no cause for it. The roots spread more rapidly and farther than the vines. Therefore give shallow but frequent cultivation.

In the early fall when the nights have become cool and heavy dews prevail, it would be well to spray with Bordeaux Mixture, to prevent blight. It may be necessary also to spray after each rain throughout the winter.

To prevent root-blight, pour a cupful of Bordeaux around the stem at the surface of the ground.

The time of planting and variety depend upon your local market, soil and climatic conditions, and the purpose for which they are to be grown.

On sandy loam soil near the foothills, where it is nearly frostless, we recommend planting seed of the A. & M. First Early and Early Stone in hot beds during November, December, and January for winter and early spring tomatoes. Tomatoes that mature the latter part of April are considered early for Southern California.

Plant seed of the Stone variety during April, May, June and July, for the summer and fall crops, for canners and shippers.

For the home garden plant the HOME TOMATO and the Ponderosa, or Beefsteak.

For shipping, only the perfect tomatoes must be selected, and these bring about \$500.00 per carload, and net the grower about \$135.00 per acre. A community growing for car lot shipment should plant not less than one hundred acres, and they should be ready for shipment from Sept. 15th to Feb. 1st, after which time the Southern tomatoes dominate the market.

For the cannery, the grower gets eleven dollars a ton, and a good crop yields ten to fifteen tons.

## A & M Early Stone

**Early Stone** We have stated that we never introduced any new variety unless we were convinced it is better than what we have previously had. So with the Early Stone Tomato. It is similar in all respects to the Rivers Brothers which proved to be all that we claimed for it last season, except that it is larger, more prolific and a better shipper. Therefore, we describe the Early Stone as being just the proper size for all purposes—

- 1st—Home, shipping and canning.
- 2nd—Red from stem to blossom.
- 3rd—Every tomato a smooth one.
- 4th—Nearly round.
- 5th—Ripens 5 weeks earlier than the Late Stone.
- 6th—Is as prolific as the Late Stone.
- 7th—Only one week later than the A. & M. First Early.
- 8th—It has few seeds, very thick fleshed and of good flavor.
- 9th—Foliage is ideal for early and late bearing.
- 10th—The Early Stone fills all requirements; it is the best all-round, all-season tomato ever offered.

Pkt. 10c (oz. 50c) (¼ lb. \$1.50) (½ lb. \$3.25) (lb. \$6.00).

### READ

We received this interesting letter in response to our inquiry concerning the small worm that bores into the tomato:

I have examined the worms in the sample of Tomatoes you sent me and find them to be what is known as the Tomato fruit worm which commonly bore into the green and ripening fruit. This is not a new pest; I have known it for over twelve years and during that time I have noticed its increase from year to year until now it is quite a serious pest.

The best remedy I can advise is clean cultivation at all times and destroy by burning all weeds in and about the field; this will destroy all eggs that otherwise would be carried over through the winter.

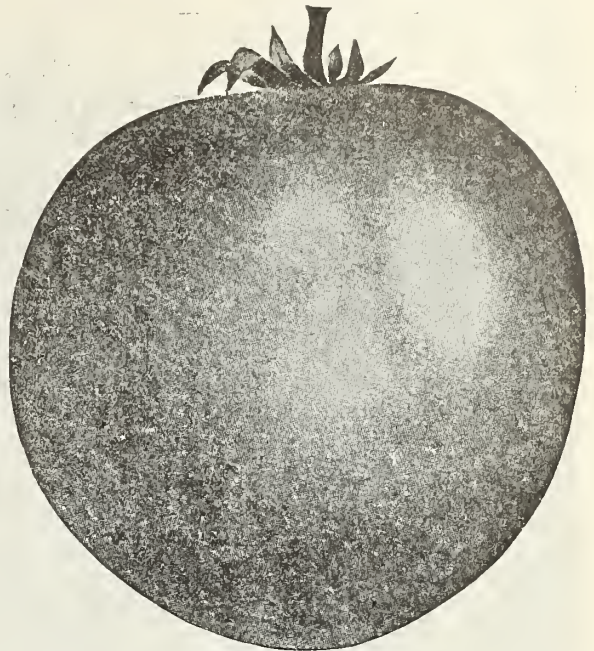
The treatment for the growing crop—spray with Lead Arsenic, three pounds to fifty gallons of water, while the vines and fruit are small; this will kill many of the few worms that first appear, and every worm killed at that time means a great many later in the season.

In making war on all insects, we should realize the importance of making the fight before the enemy gets strong and many of our insect troubles could be avoided if we would commence the control measures before the insects become numerous.

Trusting this is the information you want, I am,

Yours very truly,

(Signed) William Wood,  
Horticulture Commissioner.



The Hummer Globe

**Hummer Globe** We consider this one of the finest tomatoes for the market gardeners. It is early, solid, smooth, good size, bright red, and enormously prolific with abundant foliage to protect the fruit from scalding. As a shipper it cannot be excelled, even by the popular Stone tomato. (Pkt. 5c) (oz. 55c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

## A & M First Early

Big Money Maker  
Above \$100,000 Class

**A & M First Early** For Home and Market. Let us give a little history of early tomatoes. Just twenty years ago the Early Richmond was the earliest and hardest tomato known to the local seed trade. It was wrinkled and sour, but of fairly large size throughout the winter. This was superseded by the Atlantic Prize, a smoother but smaller tomato. Chalk's Early Jewel came next, an excellent variety in all respects except it was too soft for shipping. The Earliana succeeded, and is yet advanced by many seedsmen as the best first early tomato. We introduced the A. & M. First Early in 1909, and from that time to the present it has superseded all other early varieties throughout Southern California, and is continually growing in popularity here and elsewhere. For a first early money-maker, it has no equal in the tomato line. We cannot give it too much praise. The growers are not looking for an earlier one. It is good enough. (Pkt. 5c) (oz. 60c) (¼ lb. \$2.00) (½ lb. \$3.50) (lb. \$6.00) postpaid.

Dr. E. L. Paulding writes: "Gentlemen: I just want to tell you how well your tomato has paid me. Last December I got some of the A. & M. Tomato seed of you. I have my own plan of forcing, but it is not all in forcing, for I planted some other early sorts the same way, and served all alike. Yours was fully two weeks ahead of Earliana, if not more. I sold tomatoes for four weeks before I had any competition, getting all I asked for them, and having still the lead and the finest tomato in the local market."

## A & M Main and Late Crop Stone Tomato

For Market Near and Far---the  
Tomato for Canning

### The New Improved Stone

This is the most popular tomato in Southern California. Several thousand acres are planted to this variety exclusively for shipping to Eastern points after other tomatoes have been destroyed by frost. For this purpose the seed is planted about June 15th, and the tomato brought to full size about October 1st, after which it gradually ripens as wanted for shipping. The tomato is of good size, bright red, solid and smooth, enormously productive. Our seed was grown apart from any other variety and we confidently say no more perfect field of Stone Tomatoes ever grew anywhere than the field from which our seed was taken. (Pkt. 5c) (oz. 40c) (¼ lb. \$1.25) (½ lb. \$2.25) (lb. \$4.00) postpaid.





#### THE HOME TOMATO

8 ft. high, 10 ft. wide, and still growing. The lug box at the base is 14 in. wide. Nearly one thousand tomatoes were picked from this vine.

The picture shows one vine grown under the auspices of the Home Garden Committee by Mr. Smith, Gardener in Charge. This grew to a height of 8 feet, a width of 10 feet, and yielded about 1000 tomatoes. On November 10th when all other of the seven varieties in the garden had become exhausted, this variety was yet in prime condition with 107 first-class tomatoes, all above the size of a walnut.

Two or three vines will, if properly trellised, supply all the tomatoes an average family can use.

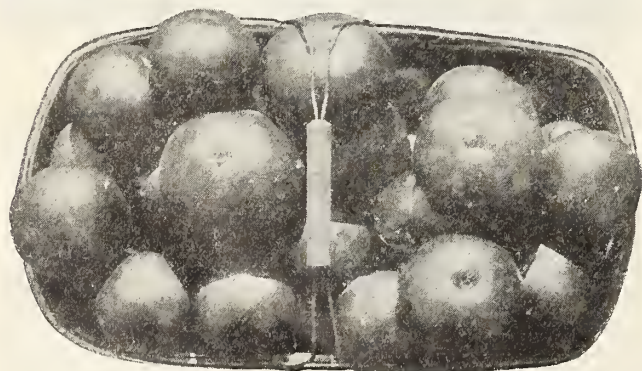
**Home Tomato** History of the Home Tomato—We are indebted to A. Brandenberger of Lan-kershim, for calling our attention to this wonderful tomato. In his hotbed one plant grew far ahead of all the others. It was quite distinct in having large foliage. Mr. Brandenberger set it in a four-inch pot, and when only eight inches high, it blossomed, and when twelve inches high these blossoms developed three nicely shaped tomatoes. This plant was exhibited in our window as a curiosity. It was transplanted to the ground and grew to cover an area of fourteen feet in diameter, loaded with tomatoes. In order to keep pure, Mr. Brandenberger propagated from cuttings off the original plant. Therefor we termed it the Home Tomato, on account of its earliness, delicious flavor, nearly round smooth shape, solid meat, and productiveness. Just the tomato for a home garden, where it can be trellised when space is limited. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.50) (½ lb. \$2.75) (lb. \$5.00) postpaid.

#### SOME INTERESTING FACTS INCIDENTALLY LEARNED WHILE PROPAGATING THE HOME TOMATO

Cuttings from the original plants, which were grown in a sandy loam, planted in adobe and watered freely grew large irregularly shaped tomatoes quite acid in flavor, while cuttings from the same plant grown in sandy loam at Artesia even with some alkali, grew smooth, uniformly shaped tomatoes.

If soil will produce such varied results with cuttings, it is likely to make a similar difference with plants grown from seed, which would account for many disappointments.

Also if soil will produce such varied results with tomatoes, it may do likewise with many other vegetables and also fruits.



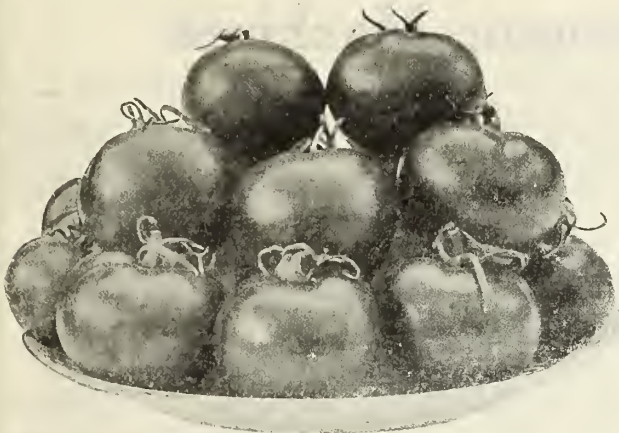
A Basket of John Baer

**John Baer** This extensively advertised tomato has become quite popular throughout the east and south, because it has come up to all that has been advertised. Our seed field shows it to be a very prolific, early, large, red, smooth, nearly globular tomato of delicious, mild flavor. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.50) (½ lb. \$2.75) (lb. \$5.00) postpaid.

Mr. Nelmler of Whittier, says of the John Baer:

"May 19th I planted 4½ acres to the John Baer and at the same time I planted a field to Stone. The John Baer ripened three weeks earlier. I delivered to the cannery 1867 boxes, average weight 53 lbs., a total of 49½ tons. I am picking yet, but I am just beginning on the Stone. One plant yielded more than 100 pounds. They are equal to the Stone for shipping and canning, and the flavor much better."





A Tray of Rivers Bros.

**Rivers Brothers** This excellent tomato proved to have all the merits we claimed for it when we first offered it last season: "That it is a good all-purpose tomato," nor have we received any disparaging comment for the hundreds of growers who planted it last season, but on the other hand there have been many comments from growers who are pleased with it. The Rivers Brothers is a perfect early tomato, but smaller in size than the Eearly Stone. (Pkt. 5c) (oz. 50c) (¼ lb. \$1.50) (½ lb. \$2.75) (lb. \$5.50).

**Earliana** The plants are quite hardy, with rather slender branches and moderate growth, well set with fruits, nearly all of which ripen very early in the season. The tomatoes are bright red and close together in clusters of five to eight; all of medium size, averaging 2½ inches in diameter. (Pkt. 5c) (oz. 45c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

**Ponderosa, or Beefsteak** A very large, purple tomato with few seeds and of excellent flavor. Our strain is round and smooth, not the usual oblong wrinkled kind. It is a favorite for the home garden, for which purpose we have on hand from March 1st until June extra fine, large, strong transplanted plants, which can be sent by mail to any address within the first, second and third mailing zones. (See list of plants, page 16. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.80) (½ lb. \$3.00) (lb. \$5.50) postpaid.

**Bonnie Best** Extra early, bright red, uniformly smooth, medium sized, solid and very prolific. It is very popular among growers of early tomatoes throughout the United States and wherever it has been tried. (Pkt. 10c) (oz. 55c) (¼ lb. \$1.65) (½ lb. \$2.75) (lb. \$5.00) postpaid.

## A & M Turnips

**Culture**—(See page 27). Turnips may be sown broadcast on damp sandy soil or in drills as beets and carrots. Drill in rows ten inches apart, not too thick in the row. The Purple Top Globe variety is now leading in popularity because of its mild flavor and its adaptability to our summer climate.

### Early Purple Top Strap-Leaf

A very popular variety in this section for either family or market use; large size, white, purple above ground; flesh fine grained; (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.



White Flat Dutch

### Golden Ball or Orange Jelly

A rapid grower of excellent flavor; bright yellow color; good keeper and a superior table variety or for stock. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.



Early Purple-Top Strap-Leaf paid.

**Dwarf Champion** (Tree Tomato)—Has long been a favorite midsummer tomato. Pink in color, smooth and solid, making it a good shipping variety. This has proven very satisfactory in Arizona. Its dense foliage protects the fruit from sunburning. (Pkt. 5c) (oz. 45c) (¼ lb. 75c) (lb. \$4.00) postpaid.

**San Jose Canner** For several years growers in the San Joaquin Valley have recommended this tomato. We are slow to offer our trade any new thing that we are not thoroughly familiar with. Therefore we tried this tomato and can say it is far superior to the Stone for the market gardener's main crop, because it is just the tomato for the table. It is not sour, but a delicious meaty tomato. Just the thing that will sell ahead of the other fellow's at the market. It is large, prolific and deep red. (Pkt. 5c) (oz. 75c) (¼ lb. \$2.25) (lb. \$7.00) postpaid.

**Dwarf Stone** (Tree Tomato)—Large, red, smooth and solid. The stalk is upright, with dense foliage protecting the fruit from the heat of the sun. It is a desirable tomato to grow in the interior valleys. (Pkt. 5c) (oz. 45c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

**Chalk's Early Jewel** Excellent early tomato for home or nearby market; very prolific, red, smooth, and desirable size. Its mild flavor makes it desirable as a salad. (Pkt. 5c) (oz. 45c) (¼ lb. \$1.35) (lb. \$4.00) postpaid.

**Coreless** A bright red, globe tomato; very desirable for the family garden, almost without seed or core. (Pkt. 5c) (oz. 40c) (¼ lb. \$1.25) (lb. \$4.00) postpaid.

To prevent blight, use Bordeaux Mixture after each rain. It is a good tonic for the vines.

**Golden Beauty** A large yellow tomato of delicious flavor, and when preserved with a slight flavoring of lemon, is better than preserves made of any other tomato, because it lacks the strong tomato flavor. It is an excellent variety for salad. (Pkt. 5c) (oz. 35c) (¼ lb. \$1.00) postpaid.

**Red Pear Shaped** Used for preserving and spicing. (Pkt. 5c) (oz. 50c).

**Grape Tomato** It makes an attractive arbor vine with a profusion of delicious fruit for preserving. (Pkt. 5c).

Get a Home Canning Outfit, and can your surplus tomatoes. Put them up right and establish your brand.

**Yellow Egg** Excellent for pickling and preserving. Small yellow egg-shaped tomato of mild flavor. (Pkt. 5c) (oz. 50c) postpaid.

**Ground Cherry** Grows like a tomato; fruits like a tomato, but the small fruit is enveloped with a husk. It is good for preserves. (Pkt. 5c) (oz. 50c).

**June Pink** The most popular extra early tomato grown in the South and East. It is very prolific and may be compared with the A. & M. First Early except its pink color. (Pkt. 5c) (oz. 45c) (¼ lb. \$1.35) (½ lb. \$2.25) (lb. \$4.00).



**Early White Flat Dutch** An early white-fleshed strap-leaved variety; for quick growth, mild flavor and excellent quality. (Pkt. 5c) (oz. 20c) (¼ lb. 60c) (½ lb. \$1.00) (lb. \$1.75) postpaid.

**Early White Globe** A large, round turnip, with sweet flesh. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.

### Purple-Top Globe

Solid, very sweet, slow to get pithy. The very best variety for the summer season. Indeed, the best for any season, but slower to mature than the Strap-Leaf. (Pkt. 5c) (oz. 25c) (¼ lb. 85c) (½ lb. \$1.50) (lb. \$2.50) postpaid.

**Snowball** Next to the Purple-Top Globe in popularity, but preferred by many because of its beauty and excellent flavor. It is slow to get pithy in the summer, but always crisp during the winter. (Pkt. 5c) (oz. 20c) (¼ lb. 65c) (½ lb. \$1.10) (lb. \$2.00) postpaid.



### Improved Purple-Top Rutabaga

The best of the Swede Turnips. Very hardy and productive; flesh yellow, is very solid, sweet and well flavored. (Pkt. 5c) (oz. 25c) (¼ lb. 80c) (½ lb. \$1.40) (lb. \$2.25) postpaid.



# Home and Field Canning Machines

Write for our Catalogue of Canning Machines

"Do not let valuable surplus Fruits and Vegetables go to Waste." This is the precautionary warning sent out by the Agricultural Department at Washington, D. C.

Adults and children can, in a few hours, with one of our HOME CANNING OUTFITS, learn to preserve all the surplus fruits and vegetables off the ranch for the family needs throughout the year, and sell the surplus, turning to profit the perishable products which formerly went to waste, thereby increasing the food supply and reducing the high cost of living.

## INTRODUCTION

Our canners have been carefully designed to make them best adapted to the work for which they are intended and are the result of our long experience and careful investigation. We present them upon their merits and solicit an examination of their efficiency and durability.

Every machine we make is carefully tested before it leaves our shops.

Those using the home canner on the farm naturally have the best fruits and vegetables that grow and the products that are canned in the prime of their freshness within a

few hours after picking are the highest quality of goods that can be packed.

Vegetables canned fresh from the vines are never permitted to wither and they retain their natural fresh-like flavor the same as when picked fresh from the vines.

Our instructions on home canning are simple; sometimes we use sugar and sometimes a savor of salt, but nothing else is used.

## NO PREVIOUS EXPERIENCE REQUIRED

Our book on canning is written up so plainly and our process is so simple you will make a success with the first lot you can. There are fruits and vegetables enough going to waste each year in this country to save millions of dollars if canned up and sold on the local market. Of the demand for canned goods it is hardly necessary to speak.

## FIELD CANNING MACHINE

### No. 3 BBS-N (See Picture)

This is just the thing for the rancher who has an acre or more of Tomatoes, Berries, or an orchard of deciduous fruit which could not be marketed profitably.

This machine, we have especially constructed for use in agricultural schools, colleges, hotel and large farm orchards where great quantities of stock is to be packed. This machine has the advantage of the hollow grate bars and tremendous heating capacity. It has two separate compartments for processing. Twelve can trays may be processed at one time, each tray holding fourteen No. 2 cans or eight No. 3 which gives it a processing capacity of 168 No. 2 cans at one time or 96 No. 3 cans. The Canner complete is one Canner, one detachable blanching compartment, eight can trays, eight lifting hangers, two Capping Steels, two Tipping Steels, two pair of can tongs, one charcoal burner, a water outlet and a book of instructions. Shipping weight 160 lbs. This Canner will work any kind of glass jars or tin cans and burns wood or coal. Price \$25.00.

### No. B-N

Size 28 in. Long, 24 in. High, 11 in. Wide

## HOME AND CLUB CANNING MACHINE NO. B-N

This machine we regard to be the best value and the most perfect Canning boiler that has ever been put on the market. This new model No. BN has hollow grate bars which increases the heating capacity to a very great extent. The fire-box of this Canner is made in the Canner as shown by the cut, and trays full of cold fruit may be inserted into this canning boiler while the water is boiling, the heating capacity being so great the water will not cease to boil when this cold fruit or vegetables are inserted into the water. This makes this particular boiler extremely desirable. These hollow grate bars strengthen the boiler at the same time almost doubling the heating capacity. Before offering this machine on the market we gave it a solid year's test and we found it to excel any model that we have ever made. This Outfit complete will consist of the Canning boiler, two lifting hangers, two can trays, one Capping Steel, one Tipping Steel, a pair of can tongs and a book of instructions. Will process three layers of fruit at a cooking fourteen No. 2 to the layer, making a total of forty-two or eight No. 3, making a total of twenty-four. It is also equipped with a close-fitting lid. Shipping weight crated in wood 55 lbs., in carton about 42 lbs. This Canner will work any kind of glass jars or tin cans and burns wood or coal. Price \$12.00.

Make a Charcoal Burner Out of a Five-gallon Oil Can

## CANNING CLUBS

Write Department of Agriculture, Washington, D. C., for Farmers' Bulletin 553; also 841.

The Bureau of Planting Industry at Washington, D. C., has inaugurated Canning Clubs throughout the eastern and southern states; and many counties under the supervision of the School Departments have demonstrating agents whose purpose is to organize Canning Clubs in each school district and to teach by demonstration how to can the products of their school gardens.

If interested write for our circular of complete instructions how to operate the canning machine, with receipts for canning every variety of fruit and vegetable.

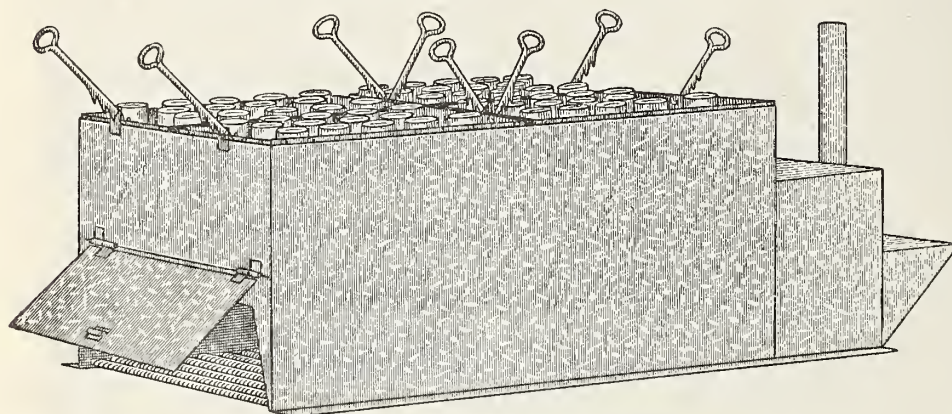
**Dry or Can Your Surplus Corn! Let Not a Grain Waste**

For wilful waste makes woeful want

And I may live to say

Oh how I wish I had the bread

That once I threw away.



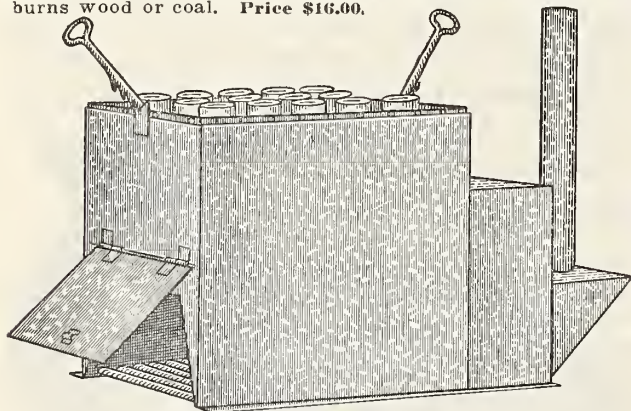
CANNING MACHINE NO. 3BBS-N

Size 60 in. Long, 26 in. High, 20 in. Wide

### CANNING MACHINE NO. BB-N

Size 30 in. Long, 26 in. High, 26 in. Wide

This machine is made identically the same as our No. B-N machine, being constructed with the hollow grate bars. For the capacity it is the greatest value we have ever offered. It has just double the capacity of the B-N machine. This Canner will process eighty-four No. 2 cans at one time or forty-eight No. 3. The Outfit complete consists of one Canner, four can trays, four lifting hangers, one Capping Steel, one Tipping Steel, one pair of can tongs, one charcoal furnace and a book of instructions. Shipping weight 80 lbs. This Canner will work an kind of glass jars on tin cans and burns wood or coal. Price \$16.00.



No. BB-N

### CANNING MACHINE NO. BS-N

Size 38 in. Long, 24 in. High, 11 in. Wide

This is without doubt one of the most complete canning devices ever offered, having two separate compartments, one for blanching, or scalding vegetables that are necessary to be blanched or scalded, and the other for processing. The water in the blanching compartment is entirely separate from the water in the Canner where the cans are processed. The scalding attachment may be detached at any time. This is the regular size B-N Canner with the scalding attachment combined. It carries the same number of accessories with an additional blanching basket and the blanching attachment. Shipping weight 65 lbs. This Canner will work any kind of glass jars or tin cans and burns wood or coal. Price \$16.00.



# Insecticides and Pest Exterminators

**Notice**—Poisonous insecticides may not be sent by mail.

Many insecticides are not dangerously poisonous. Many are in liquid form put up in tins or glass. To send these by mail, extraordinary care must be given to the packing, which necessarily adds much to the weight, and therefore the postage may seem out of proportion to the purchase price.

On bulky items where the postpaid price is not mentioned, we prefer to send by express, and shall do so unless requested to do otherwise.

If wanted by parcel post, add sufficient money to the given price to cover postage. Estimate liquids plus package at the rate of 4 pounds to the quart, or 14 pounds to the gallon.

See parcel post rate on inside of front cover page.

Prices on some items fluctuate and are subject to market changes.

## ORTHO SPRAYS

Won the Medal of Honor at the Panama-Pacific International Exposition, the highest award ever given Sprays at any Exposition. Ortho Sprays can not be sent by mail.

## ORTHO Lime-Sulphur Solution:

Standard remedy for the San Jose Scale and other Scale Insects. Highest test. (Qt. 40c.) (Gal. 85c.) (5 Gals. \$3.50.) (Bbl. 50c per Gal.)



**ORTHO Dry Arsenate of Lead:** A light fluffy powder easily mixed in water, and used for the control of Caterpillars, Coddling Moth, Canker Worms, etc. Sold in 200-lb. Bbls. (1 lb. 60c) (5 lbs. \$2.75) (10 lbs. \$5.00) (25 lbs. \$11.25).

**ORTHO Bordeaux Mixture:** (Dry) Made from the highest grade of Bluestone and Lime. Used for Peach Blight, Shot Hole Fungus, Potato Blight, etc. (1 lb. \$1.25) (5 lbs. \$5.00) (10 lbs. \$7.50) (20 lbs. \$13.00).

**ORTHO Paris Green:** Contains a high percentage of Arsenic in combination with copper. (½ lb. 50c) (1 lb. 75c).

## Ant Exterminator, Talbot's Powder

Valuable to apply in the house for roaches, as well as in the garden for ants. Put up in paper shakers. (3 oz. 25c) (6 oz. 50c) (12 ozs. \$1.00). Add 10c each size for packing and postage.

**"Black Leaf 40"** (Sulphate of Nicotine). The best insecticide to eradicate plant lice of every description wherever they may appear, or it may be used as wash for animals affected with skin diseases. There is no better spray for chicken houses. Diluted according to directions it is non-poisonous and may be safely applied to all vegetables. Dilute two teaspoonfuls to one gallon of water. Add a little soap to insure adhesion to the foliage. In tin. (1 oz. 25c) (½ lb. 75c) (2 lbs. \$2.50). Add postage.

**Blue Stone** (Sulphate of Copper). Applied in time it will prevent mildew and all fungus diseases. Dissolve one pound with hot water in a wooden or earthen vessel. Then dilute with cold water to six gallons. Sold in bulk. (1 lb. 25c) (5 lbs. \$1.00). Price fluctuates. Ask for quantity price. Can not mail powder.

**Creolium** (Liquid). For aphids, thrip, red spider, mites in chicken houses, and skin diseases on animals. Directions.—For tender plants dilute to 99 parts water. Add a little soap. Sold in tin. (½ pt. 35c) (1 qt. \$1.00). Add postage.

**Carbon Bi-Sulphide** (Liquid). For exterminating gophers, squirrels, ants or any vermin that live under ground. Directions: Saturate cotton or other absorbent, put deep into the hole and close all openings. For ants, pour into the opening. For weevil in grain, put grain into any tin-tight chamber; for one hundred cubic feet of space use ½ pint of Carbon Bi-sulphide; saturate it into any absorbent so that it will evaporate quickly; close the chamber tightly for three or four hours. It is not necessary to remove the grain from the sacks.

**Notice !!! Danger !!!** It is very combustible. More dangerous than gasoline. Therefore do not smoke or have fire anywhere near while handling Carbon Bi-sulphide. (1 qt. 40c) (1 gal. \$2.20) (5 gals. \$7.00). Can not mail.

**Formaldehyde** (Liquid).—For destroying the germs of smut on grain, of scab and rhizoctonia on potatoes, dilute one pint to forty gallons of water. Submerge potatoes one and one-half hours, and grain only long enough to moisten it. (Pint 60c) (Qt. \$1.25). Can not mail.

**S. P. Gopher Balls** Applied same as Gopher Candles, put up in paper boxes of one dozen. (Per box 40c postpaid).

**Gopher Candles** Similar to fire-crackers, and safe to handle. Put in gopher or squirrel runs, light the fuse, and close all openings. The fumes will kill the vermin. (Per bundle of twelve, 50c). Add 10c for packing and postage.

**Gopher-Go** (Poison Grain).—Very popular because it is easy to apply and does the work. Drop some grain in the gopher run early in the morning when the hole is open. Do not disturb the opening. In a few minutes it will be eaten. If the hole is not closed within ½ hour, he is dead; if the hole is closed, try again next morning. Sold in paper packages. (10 oz. 35c) (22 oz. 60c) (3½ lbs. \$1.60) (10½ lb. \$3.00).

**Hellebore** (Poison Powder).—For all insects that eat the foliage. Put up in paper. (½ lb. 25c). Can not mail.

**Kill-Scale Emulsion** (Liquid).—For scale and lice, for any sucking insects on plants or in chicken houses. (1 gal. 60c). Can not mail.

**Kill-Scale Soap** Use same as for Kill-Scale Emulsion. (2-lb. piece 25c). Add 10c for packing and postage.

**Lime Hydrated** (Powder).—A disinfectant. All insects will avoid it. It is good for the soil in plant beds and good for the plants. Put in box about the chicken house, that the fowls may dust in it. (10 lbs. 25c) (50 lbs. \$1.00). Can not mail.

**Lime** (Lump).—For white-washing and for making Bordeaux. Sold by the drum, about one barrel, \$2.00 each, f. o. b. here.

**Nico Fume** (Liquid).—For aphids in hot-houses. Similar to but is more volatile than "Black Leaf 40," which should be used on out-door plants, while Nico-Fume should be used in green-houses and hot-beds. Either spray or fumigate by vaporization, by inserting red-hot iron into the liquid. Sold in tins. (¼ lb. 50c) (4 lbs. \$5.50) postpaid; (8 lbs. \$10.50). Add postage.

**Nico Fume** (Paper).—Sold in tins of 24 sheets. One sheet is sufficient to fumigate 100 cubic feet. It is an easy way to rid green-houses and hot-beds of aphids, and chicken houses of lice and mites. Directions printed on each package. (Per package \$1.00) postpaid.

**Nikoteen** (Liquid).—30 per cent strength for spraying, strongest, purest and most economical. Death to Aphids or Green Fly, Red Spider, Mealy Bug, Thrip and many other forms of Flower, Fruit and Vegetable Lice. An extract of tobacco, containing about 30 per cent nicotine. A most effectual, economical and safe remedy for fumigating green-houses. Use a scant teaspoonful to 1½ pints of water for each pan, which is sufficient, when vaporized by placing a hot iron in it, for 600 square feet of floor space. (Pint bottle, \$1.50; prepaid, \$1.75).

**Resin Wash** (Liquid).—For all kinds of scale and fungus. (1 qt. 30c) (gal. 50c) (5 gal. \$2.00) Can not mail.

**Slug-Shot, Hammond's** (Powder).—For bugs and worms that eat foliage. (1 lb. 20c) (5 lbs. 65c). Can not mail.

**Squirrel Poison, Moore's** (Grain).—For gophers and squirrels. Sold in tin. Can not mail. (1 lb. 40c) (3 lbs. 75c).

**Sulphur** (Powder).—The Anchor Brand is the best (Per lb. 10c) (1 sack weighing 110 lbs. \$5.25) f. o. b. here. Can not mail.

## Sterlingworth Cut Worm Killer

(1 lb. box 25c) (5 lb. tins \$1.00). Can not mail.

**Sulpho-Tobacco Soap** Used as a spray for aphids, thrip, mites, and as a wash for skin diseases on animals. (Small size 10c) (Large size 25c). Add 5c each for postage and packing.

**Tobacco Dust** (Powder).—For aphids and small insects in plant beds and poultry houses. (1 lb. 15c) (10 lbs. \$1.25). Can not mail.

**Tobacco Stems** For fumigating green-houses. (1 lb. 15c) (10 lbs. 60c). Adds 5c per pound for packing and postage. (Bale, about 100 lbs., at \$3.75 per hundred pounds) f. o. b. here.

**Tanglefoot** (Paste).—Apply to trees to protect from ants and rabbits. Put up in tin. (1 lb. 30c) (3 lbs. 85c) (10 lbs. \$2.65) (20 lbs. \$4.80). Add postage.

**Whale Oil Soap** For scale and fungus. Sold in paper. (¼ lb. 10c) (½ lb. 15c) (1 lb. 25c). Add 10c per packet for packing and postage. (50-lb. case \$5.00).

**A & M Soap Spray** (Powder).—Recommended to destroy Black Scale and Fungus. (1 lb. 25c) (5 lbs. 75c) 50 lbs. \$5.00) (Bbl. 8c per lb.).



# Fertilizers

Write for Quantity Prices on All Fertilizers

California gardeners have not yet comprehended the importance of intelligent application of Fertilizers. Too often, the gardener knowing the need of something, blindly tries this and that at much expense and without results.

To avoid the waste of time and money, we have employed an expert in the manufacture and uses of fertilizers; therefore, we invited correspondence on the subject, and where it is feasible, our expert will visit your gardens that he may advise more intelligently.

The following is a list of Fertilizers that we have on hand at all times. The prices attached are subject to market fluctuations. We invite you, when in the market, to write for quantity prices.

**Cotton Seed Meal** Of all the organic nitrogenous fertilizing materials derived from a vegetable source Cotton Seed Meal is the most valuable nitrogen content, which averages 6 and 7%; it also contains 3% phosphoric acid and 2% potash; in other words, Cotton Seed Meal is nature's only mixed Fertilizer that is known today. Furthermore, Cotton Seed Meal averaging 38-42% protein, is a very valuable food for cattle. (Price per 100 lbs. \$3.90.)

**Bradley Tree and Vine** Analysis is 3% Amonia; 8% available phosphoric acid; 2% available potash, derived from sulphates. A complete fertilizer that will give immediate results. It is just what you need for the trees, shrubbery and roses. (Price per 100 lbs. \$2.75.)

**Bradley Lawn and Garden** Analysis, 5% amonia; 9% available phosphoric acid; 1½% available potash, derived from sulphates. A complete fertilizer for lawns, and should be applied during January and February of each year to give the lawn a dark green appearance. Especially recommended for berries. (Price per 100 lbs. \$3.50.)

**Gaviota Lawn Fertilizer** The result from the use of Gaviota Fertilizer on plant-life will be noted at once. It promotes the growth and appearance of grass and foliage, and increases the quantity and quality of flowers and fruits. May be used for house-plants as it has no offensive odor. (Price 2 lb. pkgs. 35c.) (5 lb. pkg. 70c) (100 lb. bags \$6.00.)

**Wizard Fertilizer** A high grade fertilizer which we recommend. It is clean, odorless, easy to handle, with no waste, and is put in convenient packages. (Price 2 lb. pkg. 25c) (25 lb. pkg. \$1.75.)

## GYPSUM (What It Does)

"It has an indirect fertilizing value which is mainly due to the fact that it has the power of changing unavailable forms of plant-food, especially potash, into available forms.

"A heavy dressing of Gypsum will greatly improve any heavy soil, rendering it lighter and more easily cultivated, and relieve the tendency to crust and bake." Per 100 lbs. \$1.00.

**Sheep Manure** Price—(\$1.75 per 100 lbs.)

**Leaf Mould** Fine for mixing in soil for potting house plants. Per sack 75c.

## Agricultural Hydrated Lime

It supplies the element calcium to plants, it makes "sour soil sweet," changes an acid condition to a slightly alkaline one, it has the power to shrink clay and adobe soils making a larger, number of crumbs from a sticky mass, it prevents packing, baking and cracking; makes cultivating easier, it promotes the normal decay of organic matter in the soil preventing the accumulation of poisonous matter, it promotes the change of nitrogen in organic matter into available nitrates, liberates and places at the disposal of plants potash and phosphoric acid already in the soil. It destroys fungus and the germs of insect life that infest the soil. Hydrated lime because of its fineness, high calcium content and concentrated condition is the ideal agricultural lime and the most economical on the market. Use one half less than other forms of lime. In cloth sacks weighing one hundred pounds. Per sack \$1.25. Write for prices in ton and carload lots.

**Nitrate of Soda** 15% Nitrogen also immediately available to the crop. Not advisable to get all your nitrogen from this source on account of the Soda content. Price fluctuates. Write for price, stating quantity wanted.

**Super Phosphate** 17½% available Phosphoric Acid. Most readily available form and about two-thirds soluble. Per 100 lbs. \$2.50.

**Bone Meal** 3½% Nitrogen and 16% Phosphoric Acid. Neither of these two elements are immediate in their action. If put in soil in the Fall some results will show the following Spring. Slow but sure. Per 100 lbs., \$2.50.

5% Nitrogen and 5% Phosphoric Acid. The nitrogen content will show results in two to three weeks. The Phosphoric Acid is from Bone, results as stated above. This is a Packing House product. Per 100 lbs., \$3.00.

**Dried Blood** 12 to 13% Nitrogen. The most readily available form of organic Nitrogen. Quick and lasting in effects. Packing House product. Per 100 lbs., \$4.75.

**Pure Fish Fertilizer** 7% Nitrogen, 4% Phosphoric Acid. Purely organic, an excellent fertilizer for all purposes for an active green growth good for two full crops. Per 100 lbs., \$3.50.

On all Fertilizers write for prices on any quantity up to car loads.

## READ THIS—Men Fifty and Over, Boys Fifteen and Under

A golden opportunity is being neglected by many persons, old and young, who have the leisure and can get the use of a small space of ground with water for irrigation that is within reach of any of the municipal markets. There is a demand for good fresh vegetables far in excess of the supply. Maintain the markets by supplying them with good fresh vegetables and fruits, and by doing so you will make a comfortable home for yourself, besides getting healthful, enjoyable exercise.

Mr. Harkness, aged 74 years, living near 42nd and Vermont Ave., Los Angeles, more than paid his grocery bill for a large family from vegetables grown on two vacant lots.

That 50,000 children, in cities of the United States, have been cultivating back-yard gardens this summer, under school supervision, must be credited to the wisdom of the national bureau of education. It was this bureau which discovered that, in a single Indiana city, 85 per cent of the boys and girls were without employment during the summer, and that they had sufficient garden space available to produce every season at least \$5,000 worth of vegetables. If the bureau's plan of home-garden work, already taken up by about 100 cities, continues to be adopted, situations like that mentioned will become fewer, and the problem of what to do with school children in the summertime will largely be solved. There will also be some mitigation of the high cost of living.

We request all newcomers who contemplate putting in a garden, whether for private use or for market, to consult us concerning the selection of seeds, preparation of the soil, fertilization, irrigation, preparing and marketing the produce.

It is our knowledge of these conditions and our eagerness to impart this information through these pages that makes this catalogue more valuable to the gardener and rancher of the Southwest and Mexico than any other.

This catalog throughout aims to give you the information you want, and you will generally find it where it ought to be. If you do not find the information you want, write us stating what you want to know. Keep this catalogue.

**READ PAGES 1 TO 4. Get acquainted with us. Rread what part we have acted to bring about the present prosperity of the gardeners of the Southwest. Nearly nil of the BIG THINGS in vegetables that are being shipped to the far East are varities we have introduced.**

## Three Most Valuable Books for California

By Edward J. Wickson, A. M.

Professor of Horticulture in the University of California; Editor of the Pacific Rural Press; Member of the National Council of Horticulture, etc.

**The California Fruits and How to Grow Them**  
Price \$3.00; postpaid to Pacific Coast, \$3.15

**The California Vegetables in Garden and Field**  
Price \$2.00; postpaid to Pacific Coast, \$2.15

**California Garden-Flowers, Shrubs, Trees and Vines**  
Price \$1.50; postpaid to Pacific Coast, \$1.60

These three books are standard and authentic works on these subjects of fruit growing, vegetable raising, and general flower gardening about the home. Written by one who knows California conditions thoroughly. Other books are listed on page 8.



# Westrobac Nitrogen-Fixing Bacteria

"Living Nitrate Factories for Field and Garden"

Bred for the West (Westrobac) the Golden Medal Bacteria. Pure, Virile, Acclimated, Nitrogen gathering Bacteria.

Four ounces properly applied to the seed for an acre of ground will put as much nitrates into the soil as can be obtained in two tons of high grade commercial fertilizer, with less labor and less expense.

This means profitable crops on poor or sandy soils, restoration of wornout lands, increased crops on good lands.

## WHAT THESE NITROGEN-FIXING BACTERIA WILL DO

1. These bacteria furnish the best and most valuable fertilizer in the world, in unlimited quantities and at only a nominal cost of money or labor.
2. They take nitrogen from the air, convert it into nitrates available for plant food, and then give it to the plant. In return the plant supplies them with carbo-hydrates, thereby enabling the bacteria to grow and reproduce themselves at an almost incredible rate.
3. They increase crops, under ordinary conditions from 25% to 60%, with no extra work. They make possible profitable crops on absolutely barren soil, such as sea sand or even coal ashes. They also improve the crops on good farm land.
4. They store up on the roots of plants the excess nitrates which the plant does not use. This is done in the form of nodules, varying in size from a mere speck to about a half inch in diameter. Official reports show this reserve supply of nitrates thus stored in the ground has been in some tested cases equal to 850 pounds per acre, or more nitrates than are contained in several tons of the average commercial fertilizer.
5. They gather moisture from the air at the same time they gather nitrogen, and also make it available for the future use of plants. This enables an inoculated field to withstand some droughts or dry seasons that would otherwise destroy the crop.
6. They work night and day making money for the farmer.



Westrobac, Actual Size.

## Cover Crops and Green Manuring Crops

1. Green Manuring is the practice of incorporating into the soil any green vegetable matter, which, upon decaying, becomes Humus.
2. The purpose of this practice is to increase and maintain the organic matter.
3. The most beneficial family of plants for this purpose are the Legumes.
4. But better than the Legumes are the Legume plants treated with Westrobac, because of their increased ability, through the agency of their bacteria, to draw nitrogen from the atmosphere and deposit it in the soil.
5. Legume plants when associated with their own bacteria make better top growth and a deeper and stronger root system. Westrobac is the leader of all commercial Bacteria for Legume inoculation.
6. The Clovers and Vetches decay more quickly than other plants, and are converted into Humus in the shortest period of time, usually about 30 days.
7. The deep roots of Legumes are able to bring up plant food from greater depth than the shallower roots of other plants.
8. "Westrobac" is the trade name of our product, a Pure Culture of Bacteria bred to order only, thereby assuring freshness and virility.
9. No danger of fungus or weed diseases in using Westrobac; it is absolutely pure.
10. A few moments only are required to apply Westrobac to the seed and the process is very simple.

Agricultural Hydrated Lime promotes a slight alkaline condition which is ideal for the development of the bacteria, it furnishes calcium which is essential to them, and its physical effect produces good air and moisture conditions necessary for the bacteria above described. See page 66.

**Nitrogen-Fixing Bacteria** is no longer an experimental, but an established fact. There are instances where its benefits were not apparent. This is due either to the fact that the soil was already inoculated, as with a crop of alfalfa or other legumes, or the soil contained alkali that is deadly to the nitrogen germ.



Nodules of Nitrogen Produced by Westrobac.

Available for Clovers, Alfalfa, Beans, Peas, Vetches, Lupines, Soy Beans, Burr Clover, Peanuts and all other Legumes.

**Westrobac** Has over 5,000 customers in California—four years ago it had only a few—the large number results from the success the few had at first and the subsequent users had later. Over 60 per cent of this year's business comes from former users. That tells the story of Westrobac's success.

A ton of stable manure adds to the soil less than 10 pounds of nitrogen—a tube of Westrobac that costs \$2.00 will add, when used with the proper seed, from 120 to 200 pounds of nitrogen per acre, at least 12 to 1 against stable manure. Nitrogen is one of the essentials of plant life and the element that in nearly all cases might be called the limiting factor—especially in California where our long hot summers bake and destroy the humus—and as nitrogen is available so is the land productive. If you have plenty of nitrogen you should have big crops, and when you can get this plant food at \$2.00 an acre, it is folly to take a chance of getting a small yield when you can have paying returns.

Over every acre you have 30,000 tons of nitrogen—why buy it in a sack when Westrobac can take it from the atmosphere and put it in the soil. It is easy to apply, a 10-year-old child can inoculate seed for one or five acres in a few minutes. No chance to do harm—only good—and only a few minutes required.

Do not apply the bacteria to the seed in the sunshine or expose to the sunshine to dry after mixing. Remember that strong sunshine kills every form of bacteria. The best results are obtained when planting is done in the early morning or late afternoon or on cloudy days. If you drill the seed in moist soil you can plant any time.

Do not use the bacteria marked "Soy Beans" for clover seed, but use for the plant only whose name appears on the box.

The prices on Westrobac now in effect are as follows:

Garden Size .....	50c
\$2.00 per acre .....	100 acres and under
\$2.00 per acre less 5% discount .....	100 acres to 200 acres
\$2.00 per acre less 10% discount .....	200 acres and over

This culture is bred in San Francisco laboratories especially for California soils. We do not put out any culture over thirty days old. It is our contention that the best results are only obtainable through the use of fresh, virile culture.

We are breeding the best commercial nitrogen culture on the market today and we are in no way competing with cheap Eastern cultures. In selling Westrobac, we are selling to our customers the very best.

Immediately upon reading this page consult us with regard to your requirements for the reason that you may place your order for delivery about your time of planting. Fresh bacteria will then be made to your order at the time required.



# A & M Greatest Soil Renovators

The sowing of nitrogen-gathering plants for green manuring has become popular because of the excellent results attained and because of its cheapness as a fertilizer that its use is almost universal not only for orchards, but for fields, particularly where melons are to be planted.

If your land is sloping, you need a cover crop to prevent eroding during the rainy season.

If your land is lumpy and dry, lacking life, it needs humus and nitrogen.

If your soil is sandy and fails to retain moisture, it lacks humus and nitrogen.

If your soil is of clay and bakes hard and crusts readily, it needs humus and nitrogen.

If you have just taken up a homestead, your soil is new and not in condition for general cropping. Therefore you want to do the best thing you can to put the soil into good chemical and physical condition as quickly as possible. To do so, plow just as soon as you can after the first rain of the season and harrow soon after each rain until ready to plant. During fall or early spring, plant hardy legumes for pasture and green manuring to be plowed under for a summer crop, plant Melilotus, Burr Clover or Vetch. If for a permanent pasture, plant alfalfa. These are all nitrogen-gathering crops and will enrich your soil with nitrogen and humus, but to get the best results inoculate the seed with Nitrogen-Bacteria.

If your planting is delayed until spring or summer, plant Cow Peas, Soy Bean, or Broad Windsor.

## Varieties Suitable for Winter Growing

### Melilotus Indica

(Write for Circular)

So much has been written about Melilotus Indica, that it is unnecessary to describe it here, except to say it is well established as the best soil renovator now available for the use of the California orchardist, because of its hardiness as a winter growing crop. We are headquarters for this seed. The price fluctuates, and therefore we ask you to write us for price at the time you want the seed. It is ready for delivery as early as August.

The Citrus Experiment Station at Riverside, Cal., has recently issued a valuable pamphlet on Melilotus Indica, written by Mr. W. M. Merty, in which is given the details of experiments covering five years.

(Per lb. 35c) postpaid. Write for quantity price.



Melilotus Indica (yellow bloom)

**Melilotus Alba** (White Blooming Melilotus) (Bokhara).—This is a valuable addition to the farm as a forage crop. When quite young, it may be pastured or cut and cured for hay. This should be done just before the bloom appears. It is hardier than alfalfa, more drought-resistant, and better for renovating the soil. It may be cut twice the first season and three or four times the second season, yielding 2500 to 3000 pounds of hay each cutting. It is as easy as alfalfa to eradicate, is biennial. Hence it must be seeded every second year. On account of its hardiness to resist extreme cold, heat and drought it is grown largely in the middle west for pasture. It is highly recommended by the department of agriculture. Price—Per (lb. 50c postpaid). Write for quantity price.



Winter Vetch

It needs but little moisture. If your grazing land lacks native grasses, plant Burr Clover; it reseeds itself, starting to grow with the first rain, and continues growing far into the dry season. Per lb. 35c postpaid.

## Varieties Suitable for Summer Growing

**Broad Windsor Beans** Sometimes called Horse Beans, grows upright on a single stem bearing a profusion of large well filled pods. The roots are enormously productive of nitrogen. It will withstand 28° temperature; therefore, may be planted as late as September for best results as a winter cover crop. Per lb. 25c postpaid. (Write for quantity price.)

Mr. E. H. Mann of Oneals says, "The Broad Windsor Bean in my trial last year proved so much better than anything else that I have tried, that it seems it is just what I have been looking for the last seven years to grow on poor winter-wet but summer-dry soil."

## Whip-Poor-Will Cow Peas

This Southern Cow Pea has proven to be very satisfactory in this climate. It is a summer forage crop, or just the thing to grow in the late summer to plow under to enrich the soil for a crop of winter vegetables. 30c per lb., postpaid. Write for quantity price.

## Soy Beans

(See page 20.) These are wonderfully valuable as a soil crop because of their nitrogen gathering propensities. For Green manuring they should be plowed under when the pods are set. (Per lb. 30c postpaid) (Write for quantity price).

## Virginia Peanuts

(See page 50) See Sechania, next page.

## White Canadian and Blue Peas

These excellent soil renovators are well suited to our local conditions. They are hardy enough to withstand the rainy season. They absorb alkali if not too excessive. A luxuriant crop can be grown when planted after January 1st. Per lb. 25c postpaid.

**Vetch** Should be sown early, August or September, to secure a good growth before the cold weather of January. While it is very hardy, it requires a longer season than some of the other crops. It is a very satisfactory crop for renovating the soil, because it is a great nitrogen-gathering plant.

Sown with barley or oats it is one of the best crops for dairymen to grow for pasture. 30c per lb., postpaid. Write for quantity price.

**Burr Clover** The native Clover, and one of the best nitrogen-gathering crops and very satisfactory for orchards. There is an increasing demand for Burr Clover, and the seed is very scarce and hard to obtain. It is the very best cover crop for poor or dry land, as



Whip-poor-will cow peas



# Clovers

(Write for quantity prices on all varieties.)



**Alfalfa** (Lucerne) (Medicago Sativa). This may well be called the King of Forage Plants; all stock relish it; may be grown in nearly every state in the Union and it is essential to the best interests of every rancher, small or large. To the "Little Land-er" with a few chickens and rabbits, as well as to the large rancher with hundreds of cattle, horses and hogs. It may be cut and fed green; judicious grazing does not injure it. If mixed with sorghum in the silo, it improves the ensilage and as dry hay it is unexcelled. It is leguminous and, therefore, a soil renovator.

Cultivation is very simple, the essentials being well drained soil, good grading, thorough sub-soiling, thorough watering and judicious harrowing; also proper fertilizing, especially on new ground. (Write for prices on all varieties.)

**Peruvian Alfalfa** Both smooth and Hairy are now generally accepted as much better than the Chilian, or common, variety. It would be superfluous to give space here to numerous testimonials, because more growers around Los Angeles are planting these varieties than are planting the common. The Hairy is a trifle more hardy than the Smooth, but the Smooth is hollow-stemmed and, therefore, less woody. The stock eat all of it; none is wasted.

**Hairy Peruvian** This variety was planted quite extensively last season and it has proven entirely satisfactory because of its hardiness. Like the Smooth Peruvian it grows nearly throughout the year, yielding as many as ten cuttings.

In sections where the eel worm and other root diseases are prevalent, both the hairy and the smooth varieties have proven immune, while the common has proven very susceptible. (Write for prices.)

**Smooth Peruvian** This variety introduced by us only seven years ago, is now the leading variety. Eleven cuttings in one year are quite common with one ton at each cutting which easily puts this variety in the lead. Because of its hardiness it will grow in the early spring; therefore, it will smother any weeds which attempt to grow.

**Eradicate Johnson and Bermuda Grass.**—Mr. King, manager of one of the Bixby ranches, says he prefers planting his Smooth Peruvian Alfalfa during December. It starts growing at once and gets a good growth before Bermuda or Johnson starts to grow. The alfalfa by that time shades and smothers the Bermuda and Johnson so effectually that it is nearly eradicated.

We have received complaints of disappointment on the part of planters which revealed the fact that unscrupulous growers were selling seed of the common alfalfa under the name of "Peruvian" in order to get the higher price. We have guarded against such an imposition by acquainting ourselves with the various growers, and we know what they have and what we are buying.

Jacob Rouf of Elizabeth Lake answers the question, "How to get a stand of Alfalfa on blow-sand," as follows: "When the soil is in good condition, plow up a field of old alfalfa for plants; then plow the field of blow-sand, drop the old plants in the furrow after the plow, from 15 to 20 inches apart—4 or 8 inches deep is all right. They will soon show above the ground, but they are too deep rooted for the sand to destroy them."

**Alsike or Swedish Clover** This is one of the hardiest varieties known. It is perennial and does not winter kill. It will do better on moist land than any other variety of clover, and is suitable for either hay or pasture. When sown with other grasses, it forms a thick undergrowth and greatly increases the yield. Write for quantity price. (Price—Per lb. 30c) (by mail 40c).

**White Clover** For lawns. (See page 77.)

**Lespedeza or Japanese Clover** (If interested, write the Department of Agriculture, Washington, D. C., and ask for Farmer's Bulletin No. 441.)

Lespedeza is a summer annual and grows from Central New Jersey, through all the southeastern states and Texas, and grows luxuriantly in the southwest under irrigation. It is a summer-growing crop, re-seeding itself. Lespedeza grows readily with Bermuda Grass and is just the thing to grow in meadows where Bermuda abounds. No danger of bloating stock that feed upon it.

Lespedeza and oats make an excellent combination, sowing the oats in the fall and the Lespedeza in March. After the oats have been harvested, the Lespedeza will yield two tons of hay per acre. It cures readily, drying in one day, and it is an excellent crop to rotate with cotton or corn. Sow 15 to 25 lbs. per acre. (Price per lb. 35c postpaid.) (Write for quantity price.)

**Turkestan** Is recommended by the Department of Agriculture as a drought-resistant variety. This claim we do not dispute, but we do decidedly announce that it is not suited to the climatic conditions of Southern California, because it grows only four or five months of the year.

**Red Clover** This is the variety grown extensively in the Eastern states, generally mixed with Timothy, which adds greatly to its value for hay. Price—Per lb. 40c postpaid (10 lbs. \$2.50) f. o. b. here. Write for quantity price.

**Sesbania** The Wild Hemp of the Colorado Delta. A wonderful soil-renovator and nitrogen gathering plant offered by us seven years ago. Owing to the general lack of information concerning Sesbania the seed was planted during December with the result that the seed did not germinate and it was so discouraging that we neglected it entirely. However, we have learned more of it, and now recommend that it be planted during the hottest months of the year—from June 1st until August 1st. Irrigate well and you will be well repaid by a luxuriant growth of beautiful fern-like foliage to a depth of six or eight feet of nitrogen gathering legume. It is a valuable summer crop for green manuring. (Price per lb. 25c postpaid.) (Write for quantity price.)

## A GOOD CLOVER FOR A MEADOW WITH BERMUDA GRASS

**Strawberry Clover** has been recommended to us for planting on damp or in meadows with Bermuda Grass. It is hardy and will, therefore, give pasture when the Bermuda is dormant. We have only a few pounds of seed and it is doubtful if any more can be obtained at any price. We suggest that if you find it meritorious, you save seed for further planting. The seed is very small. (Pkt. 25c postpaid.) See Tef Grass and Australian Giant Grass page 71.

## MORE ABOUT MELILOTUS ALBA

What the International Harvester Company says about Melilotus Alba. Before condemning it, consider the following facts:

1. It is not a weed.
2. Like alfalfa it is rich in protein.
3. Will not bloat cattle or sheep.
4. Equal to alfalfa for pasture.
5. Is a great milk producer.
6. Furnishes early spring pasture.
7. Contains more protein than red clover.
8. Fits well in the crop rotation.
9. Is a great soil enriching crop.
10. Better than any of the common clovers as a green manure crop.
11. Is a valuable plant for honey bees.
12. Prepares the soil for alfalfa.
13. Roots are soft and give no trouble in plowing.
14. Roots being tender become inoculated more readily than alfalfa.
15. Never damages cultivated crops.
16. Its roots decay rapidly, adding much nitrogen and humus to the soil.
17. Grows and will produce a crop in all parts of the United States.
18. Seeds freely in both humid and dry sections.
19. Sweet clover prevents erosion.
20. Will grow under conditions where clover and alfalfa fail:
  - (a) On land too low, too wet, or too alkali for alfalfa.
  - (b) On land too hard and compact for alfalfa;
  - (c) On soil too poor for alfalfa, especially where there is lime.



# Grasses

(Write for quantity prices on all grasses.)

## SUDAN GRASS

Write for Circular



Sudan Grass in Antelope Valley

In the pages devoted to Grasses for fodder and pasture, we are offering the standard varieties which have proven entirely satisfactory here, and some that give promise of proving a valuable addition to the list.

**CULTURE.**—Sudan grass may be grown either drilled, in cultivated rows, or broadcast. If planted in cultivated rows, the rows should be as close as possible and yet permit of easy cultivation. In 30-inch rows, 3 to 4 pounds of seed per acre is ample, and under conditions of low rainfall this method is recommended. Under irrigation, 18-inch rows are preferable and 4 to 6 pounds of seed per acre is sufficient.

For broadcasting, 20 pounds of seed per acre should be used. The seed should not be sown until the ground is warm, that is about the time for planting corn. The young plants will withstand slight frosts without injury.

**It grows luxuriantly on strong alkali soils.** On the ranch of the Montana Land Co., near Alamitos, Sudan Grass planted in midsummer on alkali land grew luxuriantly together with alkali weed, and where no other weed would grow. It is difficult, however, to get a good start under such conditions, but once started it grows profusely.

## SUDAN GRASS FOR PASTURE

"The foregoing points are not all the best features of this new grass. In the months of August and September, when all other grass is dry, then is the time that Sudan is most valuable for fall pasture for cattle and hogs, and by having it fenced off in small lots, it will yield food for five times as much stock as any other forage plant will, without irrigation. For milch cows and hogs, I can't think of a better and more abundant pasture than Sudan. I believe it will solve the hay proposition as nothing else can or will do in this climate."

Sudan Grass is ideal for growing with the Whippoorwill Cow Peas. The stem is stiff enough to support the vines, and the mixture makes a better balanced ration for the stock. It is a good silage.

"I raised Sudan Grass 9 feet tall between rows of corn 14 feet tall for exhibition in 1915." H. Lundquist, Middletown, Cal.

"Planted in drills last spring it grew 7 feet. I could have cut it three times, but I pastured it with pigs." Geo. Winn, Ruth, Cal. (Per lb. 75c postpaid.)

**Rhodes Grass** In our introduction of Rhodes Grass last year, we did not put sufficient stress on the time of planting, with the result that it was planted during the winter months instead of in the spring when Beans and Corn are planted. When well rooted it will survive our winters, but makes slow growth during the winters months. It is a valuable forage crop, therefore, it should be thoroughly tried. Mr. Oakley of the Department of Agriculture in the year book of 1912 entitled, "Some New Grasses for the South" says:

"To be a valuable hay grass a species must possess certain important characteristics. It must be aggressive, or at least able to maintain itself for a considerable length of time against weeds and other enemies; it must furnish a profitable yield; it must be palatable and nutritious, and possess a good color and general appearance, either loose or in the bale, when cured; and it must have reasonably good seed habits. Rhodes Grass has all of these qualities, and besides it seems to be able to grow on poor soil and is also fairly drought resistant. Its inability to withstand low tempera-

tures, however, limits materially its area in the United States.

Prof. Maiden, the Government Botanist of Australia, says of the Rhodes Grass: "It is ideal for ensilage. It yields five tons per acre."

"It smothers Nut Grass. It is a good grass for green food. It is an excellent grass for hay. It is a rapid grower. It has fibrous roots so that it is not likely to be a nuisance, since it can readily be eradicated if desired. The seeds germinate readily. It runs six to eight feet, and then grows erect. It is very palatable to stock. If it has any objectionable features I do not know of them, and, therefore, I have recommended experiments with it in many parts of the State. Experiments that have already been made, prove that it will stand the fierceness of frosts, and the seed has not been found at all injurious to stock; the animals like it."

### Good In Arizona

Mr. J. J. Thorber, of the Arizona Experiment Station, says: "I have had Rhodes Grass under observation for several years. It succeeds beautifully in our heavy clay loam soils and even in sandy or gravelly soils. Its growth is marvelous under our conditions."

It withstands to a remarkable degree extremes of moisture and drought.

Sow the seed broadcast at the rate of ten pounds per acre, about corn-planting time, on well-pulverized soil, and harrow lightly.

While the principal value of the grass is for grazing, it is also used for hay, giving two or three cuttings of about one ton each per acre. The hay is of excellent quality. It bears severe drought and moderate frost without injury, but is easily killed by plowing late in the season.

### Good In Texas

"It has proven the most satisfactory hay maker ever introduced in the Lower Rio Grande Valley. It has not failed to produce one ton per acre per month. I will sow it in my alfalfa field so that it will soon choke out the alfalfa and the field will consist of Rhodes Grass only. It is a weed exterminator. Yours truly," E. E. Evans.

(Per lb. \$1.00 postpaid.)

## Golden Crown Paspalum Dilatatum

From Australia. Just the thing to reclaim marsh-lands, and equally good to survive drought. It has been to the Australian dairyman what alfalfa is to the California dairyman. It survives extreme cold, and in Southern California it grows the year round, thus insuring green feed all winter.

Mr. Sullivan, dairyman of El Monte, planted it on land too wet and soft to allow his cattle to pasture upon it. Alfalfa would not survive. He sowed Paspalum on ridges between alfalfa checks. The first season only demonstrated it would grow throughout the winter. The second season proved its worth. It had seeded to a wonderful degree. The seed grew, taking root among the weeds and devil grass, choking out everything in its way. The dense tufts of grass made a thick mat capable of supporting the cattle. Mr. Sullivan cut it three times during the season, each time getting about one ton of dry hay to the acre. The stock relish it fully as well as alfalfa. It makes a fine hay free from any wood. It is as easy to eradicate as timothy or any other bunch grass.

It is at its best in deep rich soil. It will grow well on moist land and swampy ground. The roots penetrate deep into the ground and thus it will withstand the hottest and driest of summers.

Sow broadcast from 7 to 10 lbs. of seed per acre. In the spring time after the ground has become warm is the best time to sow.

When grown for pasture it should be well eaten down. Being soft and succulent, stock will eat every part of it. (Per lb. \$1.00 postpaid.)

**Teff Grass** (See also Strawberry Clover, page 69.) A native of Abyssinia. Mr. J. E. Hathaway, of Norwalk, planted a trial packet last year on alkali soil and it grew to perfection, about 18 inches high; produced mature seed; was cut, and grew a second crop of seed. Stock relish it, and it can not become a pest. It is also recommended to grow in forests and underbrush. The seed is much smaller than turnip seed, and it is very scarce. We can get no more, and if you find it meritorious, save seed for further planting. (Per Pkt. 25c postpaid.)

### A Word About Grasses

Each one of the grasses offered on these pages requires certain conditions of soil and climate, but each one is valuable where conditions are favorable to its growth. But for general conditions such as we have throughout the Southwest, we have placed Sudan Grass at the head of the list. It is claimed Rhodes Grass will continue growing with less moisture than any of the other grasses except Salt Bush. For permanent all year pasture plant Paspalum, Italian and Perennial Rye grasses. When in doubt, write us about it.



## GRASSES—(Continued)

## A &amp; M Parra Grass



Parra Grass the second season without irrigation, grown in a vacant lot in the City of Los Angeles

every stem took root when planted. It multiplies rapidly. The experimental patch on our trial ground demonstrated it will withstand considerable alkali. If well watered until the latter part of June, it will remain green the balance of the dry season, and if cut as late as August it stools wonderfully and grows without irrigation. With the same amount of irrigation usually given alfalfa, Parra Grass may be cut as often and yield much more hay. There can be no better pasture for the dry season, with or without irrigation, provided it has a good start.

It is just the crop for overflow lands because it will grow under water, thus establishing a good pasture by the time the land is dry enough to turn the stock onto it.

Mr. Horace Metcalf, who has been growing it for five years in Los Angeles County, and is familiar with it in Mexico, states: "It does not go to seed in this climate. It may be cut three times in one season and produce twenty tons of hay per acre for the season. It cannot become a pest on dry land, but on wet land it would be difficult to destroy it. It cannot be drowned or destroyed by overflow." It is just the thing for damp or irrigated lands. We cannot recommend it too highly for a permanent pasture on damp land.

**Parra Grass for Gun Clubs** Just the thing to plant around the edges of lakes during the summer as the water recedes. It will take root and grow luxuriantly by the time the lakes are again flooded, and continue to grow under water, thus making a permanent and ever-increasing pasture for ducks, wild or tame.

We offer a limited quantity at 25c for 25 stems by mail postpaid, 100 stems for 75c postpaid, 1000 stems \$4.00 f. o. b. Los Angeles. Weight of 1000 is about 25 lbs.

**Salt Bush (Atriplex Semibaccatum)** This is the common Salt Bush; will grow on any soil, even in the strongest alkali, and will thrive luxuriantly for years without rain, absorbing its moisture from the air. Plant the seed on any waste land and turn the place into profit. All stock eat the tender growth in the spring, but do not relish the matured growth in the fall. It may be easily eradicated by one plowing. Price—Per (lb. \$1.00) postpaid. Write for quantity price.

The best way to get a stand of Salt Bush is to sow broadcast the seed on sod or stubble during the months of January and February.

**SALT BUSH** has made a new record which establishes a value. Heretofore, this has not been appreciated although for years we have tried to make plain that its principal use was for sheep and goat pasture.

Mr. Howard, who has large interests in the San Clement's Islands, and maintains large herds of sheep and goats, states that were it not for the several hundred pounds of salt bush he purchased from us several years ago he would, undoubtedly, have lost his herd. If you have any waste land, sow Salt Bush; it may be depended upon when all else fails.

**Orchard Grass** Price—Per (lb. 50c prepaid). Write for quantity price.

The grass for marshy land. This grass comes from Vera Cruz, Mexico, and is not propagated from seed, but from the stems that are planted where wanted. All stock relish it; it is sweet and succulent, and when established, will stand any amount of pasturing or cutting for hay. It thrives best on heavy wet or damp land. We have a limited amount of the grass which we procured from Vera Cruz. It was sent us like a sheaf of wheat, wrapped in burlap, was fourteen days in transit, yet

**NATAL GRASS.**—We had many inquiries for seed of Natal Grass. We studied the subject and find that it is being grown extensively in Florida; that only three years ago there was about 40 acres of Natal hay growing in Lake Co., Fla., but now there is more than 6000 acres growing in that county.

We concluded it must have merit, and therefore we have added it to the list of grasses offered in this book, with the following description by a large grower in Florida:

This grass is an annual grass from South Africa which is now commonly grown in many tropical and semi-tropical countries. Sometimes it is called "Australian Redtop," but is not related to the true redtop. The seeds are borne in loose pink, downy, branching sprays, the color of which fades to almost white when the seed is matured.

If the seed is sown about May 1, the first crop of hay will be ready for harvesting about July 15. Natal grass requires about eighty to eighty-five days from seeding to maturity under favorable conditions.

(Per lb. \$1.00) postpaid. Write for quantity price.



Natal Grass

**Italian Rye Grass** Excellent for damp land; grows rapidly; makes good hay, but is at its best in moist low lands. It grows continuously until allowed to run to seed. Dairymen having moist land should avail themselves of this valuable pasture. Price—(Per lb. 25c prepaid) (100 lbs. \$10.00) f. o. b. here. Write for quantity price.

**Australian Rye Grass** Very similar to Italian Rye Grass, but will resist more drought. It survives the dry season and starts new growth when the rains set in. Price—Per (lb. 25c prepaid) (100 lbs. \$10.00) f. o. b. here. Write for quantity price.

**Australian Giant Grass** It is similar to Sudan Grass; is succulent and relished by stock as pasture or fodder. Will grow more tonnage than Sudan. After two years of effort, we have secured a few pounds of seed which is very light. No more can be had, therefore, save seed for further planting. (Per pkt. 25c postpaid).

**Timothy** Does very well in moist land and will mature a fine crop of hay in 110 days from seed. We do not recommend it for Southern California. Per lb. 25c prepaid. Write for quantity price.

**Bermuda Grass** Excellent for pasture meadows, but a pest on the farm or in the garden. Withstands drought and grows luxuriantly when irrigated. Sow 10 pounds per acre. Will stand more pasturing than any other grass we know of. Price—Per (lb. 65c) postpaid. Write for quantity price.

**Alfilaria.—(Erodium Cicutarium)** One of the most nutritious of plants. All stock relish it, even prefer it to most any other forage. Like Burr Clover, it is native to Southern California, and would be more prevalent were it not so difficult to gather the seed. It requires five pounds of seed to plant one acre. A few pounds of seed scattered over a range would within two years have the place well covered with alfilaria. Price—Per lb. 85c prepaid. Write for quantity price.

## PERMANENT PASTURE

It is difficult to establish a permanent pasture on arid uplands. About the best that can be accomplished is with the native grasses or clovers.—**Alfilaria**, **Burr Clover**, **Mellilotus Alba**, **Fox-tail**, **Wild Oats**, and a few others. These will not survive the season of drought, but reseed themselves. Nor do we know of any imported grasses that will satisfactorily endure on mesa lands through our long periods without rain. The **Australian Salt Bush** (*Atriplex Semibaccatum*) comes nearer to being an all year pasture for this condition than any we know of, but while stock relish it when young and tender, they must be starved into eating it when it becomes stale and the tender foliage ceases to grow.



## Field Corn

The corn crops of the middle west, where much of our seed has been grown, failed so utterly that our grower reports he can deliver only a small percentage on some varieties. Fortunately, Southern California had no failure of its crop of corn, but the greater part of the acreage was cut for the silo, and the high price of corn for feed and mill use combine to make seed corn scarce. We have endeavored to provide for an ample supply, but some favorite varieties will be inadequate to meet the demand. (25c postpaid) (10 lbs. 60c) (f. o. b. here.) Write for quantity price.

We are listing only those varieties that have been tried here and have proven highly satisfactory. Prices of all varieties of field corn subject to market change. (Per lb. 15c postpaid) (10 lbs. 60c) (f. o. b. here.) Write for quantity price.

White	
Champion White Pearl .....	110 days
Wisconsin White Dent .....	110 days
Iowa Silver Mine .....	100 days
Red Cob Ensilage .....	100 days
Hickory King .....	110 days

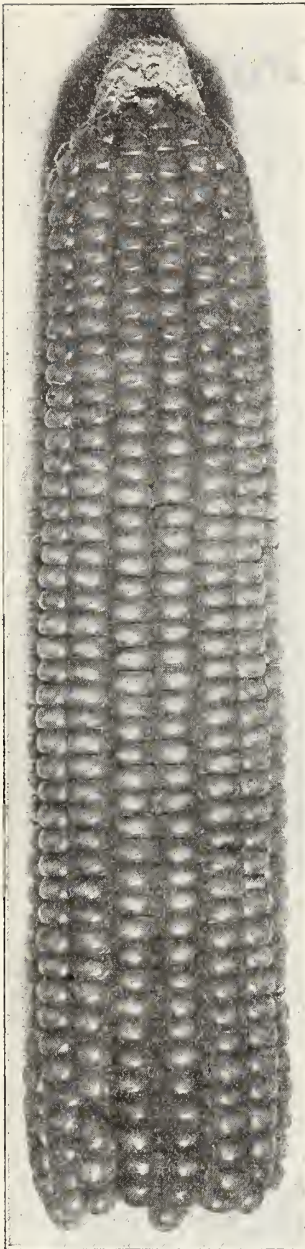
Yellow	
Reid's Yellow Dent .....	100 days
Golden Beauty .....	100 days
King of the Earliest .....	100 days
Pride of the North .....	90 days
Improved Leaming .....	100 days
Iowa Gold Mine .....	100 days
Minnesota King .....	100 days
King Philip Yellow Flint .....	90 days
Calico or Squaw .....	100 days

**Read This.**—When grown without irrigation, our Pride of the North and King of the Earliest varieties are the most dependable. They are always a sure crop because of their extreme earliness, and they surprise the grower because of the great yield of grain.

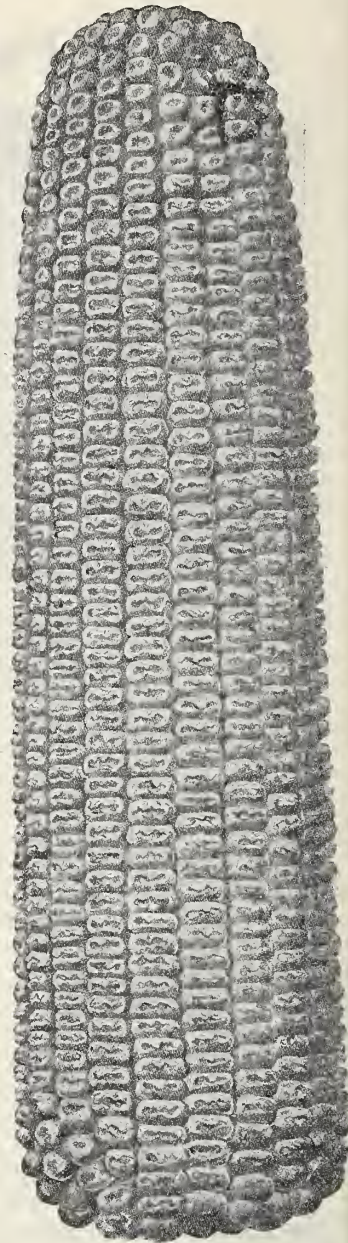


Eureka Ensilage

Grown by C. W. Clanton, Norwalk, Cal.



King Philip Flint



King of the Earliest

## Orange County Prolific

For Ensilage as well as Corn

This White Dent variety is strictly a California product, and will surpass in amount of fodder or grain any other variety we have ever offered. It will readily yield one hundred and ten bushels of grain per acre, and when grown for ensilage it will yield more than thirty tons of ensilage per acre. We base this statement by comparing it with the Eureka Ensilage Corn, for which they claim seventy tons. Several fields of this corn were grown near Downey last season, almost by the side of our Orange County Prolific. See our picture of a field grown by Mr. Clanton.

(10 lbs. \$1.00 f. o. b. here.)

### SWEET CORN FOR GREEN FODDER

We offer a good grade of sweet corn seed to sow in drills broadcast for green fodder. (10 lbs. \$1.00 f. o. b. here.) Write for quantity prices.

**About Corn.**—More than 2,000,000 bushels of corn is produced in California annually, yet this is scarcely half enough to meet the local demand. This condition ought not exist because there is ample acreage where corn may be grown under irrigation, and near the Coast where it may be grown without irrigation. Where corn cannot be irrigated, plant the "King of the Earliest" variety.

**Eureka Ensilage** This variety has been grown around Norwalk and Downey for several years. It is not only prolific of large ears of white dent corn, but it is justly famous for the enormous tonnage of silage it produces. Our eastern seedsmen in introducing it, claim that it will produce seventy tons of silage per acre. We have no accurate record of the actual tonnage produced, but we believe that thirty-five tons is easily possible, from the fact that we have a record of thirty tons for the Orange County Prolific. (10 lbs. \$1.00 f. o. b. here.)

**Mexican June** The corn for the arid southwest. When the white man was a pioneer in Arizona and New Mexico, he tried to grow corn but failed. The country and climate was condemned; corn could not be grown, but thanks to the good work of the various state and federal experiment stations, we have the Mexican June. This has been bred up by years of selection from seed which has existed among the Indians from time antedating the Aztecs. Imperial Valley growers realized its merits ten years ago. In Arizona, New Mexico and Texas, it is now grown where no other variety will thrive.

Mr. Schultz, of Orange county, says: "A friend gave me a few ears of Mexican June corn; I planted it on sandy soil, expecting to irrigate it, but could not do so. I thought it would die and did not even expect fodder, but see for yourself; good, big ears that would yield fully a ton of grain per acre. (10 lbs. \$1.00 f. o. b. here.)"



# The Silo

Write Department of Agriculture, Berkeley, Cal., for Circular No. 138, September, 1915, by Professor F. W. Woll also Bulletin No. 282, issued August, 1917.

**The Silo** A Big Money-saver. If you have ten or more head of stock, it will be profitable for you to have a silo. Therefore, if interested write at once to the University of California, College of Agriculture, Berkeley, California, for circular No. 138 (Sept. 1915), entitled "The Silo in California." It is complete in its information and after reading it you have all the information you will need, and you will at once go about building a silo. Just the size you will require, and you will know about what it will cost. Send at once for circular 138. This circular tells you what crops are best and what proportion of water to add; what stage of maturity crops may be cut; in short, the information in the circular is so complete you cannot make any mistake, from the building of the silo to the time when the silage is ready to feed to the stock.

## BEST CROPS FOR SILAGE

Now that you have a silo you want to grow the best and most productive crops to fill the silo. Indian Corn heads the list, as recommended by the author, and we recommend the Orange County Prolific Corn as the most productive of tonnage and highest in saccharine; Hickory King follows, these varieties yielding 20 to 30 tons of silage per acre. For the Silo Indian Corn should be cut when the grain begins to harden.

Sweet Sorghum is next on the list,—Amber Cane and Texas Seeded Ribbon Cane are the best. The Delta Farm and Live Stock Co. report "20 tons of silage from Ribbon Cane, and that horses and mules are doing well with this, with some oat hay added each day.

Corn, Cane, and Alfalfa make a good silage for cows and hogs."

Sorghum should be cut after the seed has become quite hard and never when green.



Actual Photograph Dwarf Milo Maize  
6000 lbs. of grain per acre.  
57 Heads on This One Stool of Dwarf Milo  
Grown by Wm. Kruger, Woodlake, Cal.

**Dwarf Milo Maize** The King of all Sorghums for Grain. Is much preferred to the tall variety because it stools wonderfully and matures a large head of seed on each stool, producing as much as 3500 pounds of grain per acre, and the stalk being shorter and having more foliage, makes it more desirable for fodder. Dairymen find that the cows will give more and richer milk when fed on it. It is the right crop to plant in young orchards because it will not shade the small trees.

We have Dwarf Milo Maize grown from pedigreed stock. For the past three years the heads were carefully selected in the field before harvesting. Now we have a strain that grows about four feet high and produces forty per cent more than it did three years ago under the same climatic and soil conditions.

It is highly recommended by the State Department of Agriculture for silage. (Per lb. 25c postpaid.)

Mr. W. W. Fletcher of Lindsay, California, writes, "I wish to state that the Dwarf Milo Maize I received from you last year yielded over 6000 lbs of grain per acre; much more than you claimed for it.

**Legumes** Clover and Cow Peas are not given special recommendation by Mr. Woll, but we quote from reliable authority that "to plant Cow Peas with Corn, add much to the amount of herbage for pasture, and the mixture makes a splendid silage, adding materially to its value as a mixed ration."

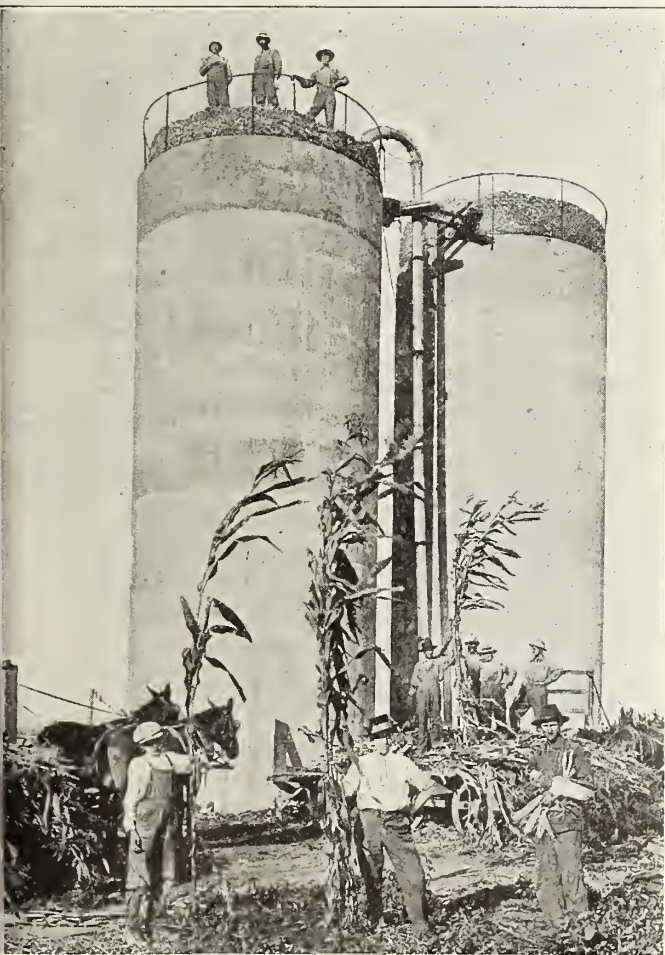
Peanut straw makes excellent silage and a rich food. Bean straw right from the thresher to the silo makes a good combination with sorghums when mixed in the silo.

With a silo nothing is wasted and the stock relish it better than the green or dry fodder.

Sorghums are valuable, both for forage and grain, particularly for conditions in the southwest. No degree of summer heat seems to be too great, but they will not withstand frost and must not be seeded until late in the spring. The great secret of success in growing Sorghum is a well worked fine, firm seed bed not too deep, but loose open soil should be rolled before seeding. Sow only when the ground is warm from 1 to 1½ inches deep. Sorghums will withstand extreme drought, keeping fresh and green when corn has been destroyed and, remaining semi-dormant, will start into new life as soon as water is applied and on this account it is especially suited for arid regions.

No cultivated crop exhibits so great a diversity as Sorghums. Different varieties have been developed for Grain, Sugar, and Broom Straw, and all the groups produce forage as a by-product.

With few exceptions, Sorghums are annuals with long fibrous roots and they are not liable at any time to become a pest. They may be sown in rows sufficiently wide apart to cultivate or broadcasted for hay or silage.



TWO 150-TON SILOS

On Frampton Bros.'s Ranch, Artesia. Filled with Eureka Ensilage, grown on 9½ acres; an average yield of 33 tons per acre. (Notice the height of the corn.)



# Non-Saccharine Crops for Grain and Forage

All prices are subject to market change  
If large quantities are wanted by mail add the necessary postage. See inside front cover page.

Dwarf Milo Maize heads the list for grain, and Feterita a close second. These crops are given special mention because being drouth-resistant they grow very well in the southwest.



Dwarf Milo, the King of All Sorghum for Grain  
\$5,000 Acres of Dwarf Milo and other Sorghums in Imperial alone. (Some big joy to Hoover.)

**Feterita** Of the many non-saccharine sorghums offered in this book—none have proven more popular from the start than Feterita, on account of its astonishing growth after it becomes well rooted. Every testimonial received expresses astonishment at its rapid growth.

The grain has about the same feeding quality as Egyptian Corn or Milo Maize; yields from two to three tons of grain per acre. It is bothered very little by birds, as they are unable to shell it out and waste it. The seed is more susceptible to cold than other sorghums, therefore should not be planted so early, nor should it be planted in cold soil.

The Riverside and Orange County growers report it far ahead of the common non-saccharine crops. For both excellence and abundance of forage it cannot be excelled when cut young, and for grain it is equal to any.

The second growth stools wonderfully, producing several tons of excellent forage for pasture or for ensilage after the seed has been harvested. It thrives luxuriantly on soil so alkaline that field corn will not thrive. The heads are upright. Eight pounds of seed is sufficient to plant an acre drilled. **Price—Per (lb. 25c prepaid) (10 lbs. \$1.00) f. o. b. here. Write for quantity price.**



Egyptian Corn

**Egyptian Corn** Like the preceding fodder crops, it is grown chiefly for the foliage to pasture when young, but yields largely of grain. The chief merit of these fodder crops is in their hardness to produce fodder and grain with almost no rainfall or irrigation. Sow eight pounds per acre drilled. **Price—Per (lb. 25c prepaid) (10 lbs. \$1.00) f. o. b. here. Write for quantity price.**

One man can attend to the planting, irrigation, and cultivation of 160 acres, paying only for the harvesting and threshing. The cash outlay to grow 160 acres is approximately \$800.00. The gross returns, estimating one ton of seed per acre which sold last season for \$37.00 per ton, would be \$5,920.00. This is a very conservative estimate.

A Berkeley test of our Milo Maize showed germination 96½%. Cracked seed less than ½ of 1%. All our grain is carefully re-cleaned.

## Texas Seeded Ribbon Cane, also called Gooseneck Cane

It is usually planted in rows 3½ feet apart, using from 6 to 10 pounds of seed per acre. Grows from 10 to 15 feet high. Texas Seeded Ribbon Cane is one of the best crops that can be grown to use as ensilage on account of the enormous yield it makes per acre. Mr. Geo. L. Miller, of the 101 Ranch, states as follows: "We have experimented on a large scale with every variety of Kaffir, Milo and Sorghums. Milo Maize has done well, but the stalks and fodder has not the feeding value it should have. Sorghums seem to be the best and surest and have better feeding value than any of the other forage crops."

Of all the varieties of Sorghums grown, there are none that can compare in yield with the Seeded Ribbon Cane. It has produced a yield of 55.98 TONS OF GREEN WEIGHT PER ACRE.

"We recommend that all farmers should plant 10 to 15 acres or as much more of the Seeded Ribbon Cane as they have stock to feed."

"Land is too valuable to get from 5 to 10 tons of silage from, when the same acres can yield 30 to 35 tons per acre with same expense. We have received these results and any other farmer can do the same." **Per lb. 25c postpaid. Write for quantity price.**

**Early Amber Cane** The merits of the Early Amber Cane have long been recognized throughout the southwest where it grows to perfection. If you need forage for your horses, cattle or hogs Sorghum planted about April 1st will furnish you the best feed in the shortest space of time. One-half acre will feed four head of stock all summer if only enough is cut each day for one day's need. In this way one can cut continuously all summer. As much as ten tons may be cut from one acre, and it is the best and sweetest of all sorghums for ensilage.

It usually yields three cuttings a season, but it should not be fed before maturing as it is liable to bloat, but afterwards the sugar it contains is very fattening. Steers and hogs can be brought to prime condition with no other feed. **(Per lb. 25c postpaid.)**

### A Word About Amber Cane

Mr. R. N. Atmore, of Piru, Cal., is authority for the following statement: "For more than twenty years I have planted sorghum about the first of April. About the time it is well seeded I have some hogs ready to fatten for the market. I turn the hogs into the field of Amber Cane every day toward evening. In this way they eat all they want without waste, and about the time it is all gone the hogs are ready for market. This is all the feed they get for fattening. Saves me much labor, and the exercise is healthful for the hogs. I sow one acre of Amber Cane for every twenty hogs."

**POISONING BY SORGHUM:** Many are reluctant to feed Sorghum for fear of poisoning stock, but we herewith give the facts:

When cut before flowering, it must be allowed to wilt in the sun for several hours before being given to the stock at this stage it contains a proportion of prussic acid and liable to be poisonous. This disappears after the flowering stage is reached. This poisonous quality is more noticeable in the second crop, or, when after a period of drouth or frost when young it has become stunted. In the form of properly prepared silage or dry fodder, Sorghum is never poisonous, but it is dangerous to pasture or to feed green sorghum after it has been frosted or stunted; it should then be cut and dried or ensilaged.



## Millets

**CULTURE**—Lumpy or hollow land is bad, therefore, it is essential that the soil be well worked and a fine, firm seed bed be made. With shallow surface soils, deep plowing is not advisable. Roll or drag before seeding, particularly, on loose or open soils. The secret of success in growing millet is shallow seeding and only when the ground is warm. 1 to 1½ inches is deep enough. Sow any time after April 1st if the weather is favorable; broadcast 15 lbs. of seed per acre, or, 8 lbs. when drilled 7 inches apart.

When grown for pasture the stock may be turned on when it is about 8 inches tall, and fed down fairly close, but the stock must not be kept on longer than necessary or injury may be done.

When irrigation is needed, the stock should be taken off and water applied. When the land is sufficiently dry it should be harrowed cross-wise with a sharp toothed harrow, and the crop be allowed to grow 8 or 10 inches and pastured again.

When desired for hay the seed should be sown in drills 16 inches apart and cultivated with a hand cultivator or a beet cultivator and worked between the rows until it is about three feet tall. Cut before the seeding stage and about 3 inches above the ground. This is important. The hay should not be fed until after it has been well wilted or it will bloat.

Seed of nearly all varieties sell at a good profit and in almost unlimited quantities; therefore, it is well to cut twice and then let it mature seed.

As hay it should not be fed to horses without a mixture of oat or barley hay which renders it non-injurious.

### German Millet

Produces from 4 to 5 tons of hay to the acre, or from two to three thousand pounds of seed. Seed grown in moist land will mature a heavy crop of hay without irrigation. Yields two crops in a season. Sow 20 pounds to the acre. Price—Per (lb. 25c postpaid.)

### Common Millet

It is an annual grass, its luxuriant leaves being very juicy and tender, are much relished by all stock. It makes a very good hay. Sow 30 pounds to the acre. Price—Per (lb. 25c postpaid.)

### Hungarian Millet

It germinates readily and stands great drought. Has numerous succulent leaves, broad and over a foot in length. Furnishes an abundance of green fodder, relished by all kinds of stock. Sow 40 pounds to the acre. Price—Per (lb. 25c postpaid.)

**Hog Millet** Grows rapidly and abundantly. Hogs pastured on Millet need no further fattening. It attains perfection anywhere in the Southwest. Price—Per (lb. 25c postpaid.)

### Japanese Millet

(Echinochloa Frumentacea). This is also known as Barnyard Millet, or Billion Dollar Grass. For pasture or hay this is the best of all the Millet family. It comes early and may be pastured in four to six weeks after planting. When thoroughly established will take a large amount of water and will survive submerged under water for weeks, but it is not well to allow water on the surface for more than 48 hours, and as soon as the soil will permit go over it with a harrow. The millet will then be hardier.

**Russian Flax** will undoubtedly grow as luxuriantly in the Imperial and San Joaquin Valleys as it does in San Luis Obispo County, where it is at its best and yields about two tons of seed per acre. This at a normal value of \$2.25 per hundred pounds, f. o. b. San Francisco, means \$90.00 per acre to the grower, less the freight. This is better than wheat and corn, and no more expensive to grow. Sow 40 pounds of seed per acre. It requires the same culture as barley.

Price—(20c per lb. prepaid). Write for quantity price.



German Millet

## Grain and Field Crops

When field seeds are desired by mail, add the required postage. See inside front cover page.

Write for quantity prices on all grain.

With our up-to-date facilities for cleaning all kinds of seed, we aim to have all field seeds as clean and free from foul seeds as it is possible to make them.

Grain and other field seeds that pass in the open market as clean will often show ten per cent or more of broken grain, foul seeds, chaff and dirt. Should our prices appear higher than others, you will find upon investigation that they are cheaper, because of the purity of the seed.

A sample of our Milo Maize Seed sent to Berkeley was reported as follows: "Germination 96½%; Cracked Seed less than ½ of 1%."

## Wheat

Sow 60 to 80 lbs. per acre

**Turkey Red** One of the best for milling, because of its hard, flinty grain.

**Sonora** Generally grown in the interior, thirty miles or more from the coast.

**Defiance** Grown almost exclusively near the coast because it is more nearly rust-proof than any other varieties.

**Durum or Macaroni** Highly recommended by the United States Agricultural Department because it withstands drought, and is better adapted to dry farming on mesa lands. It has proven this claim in many places in the arid sections of the country. One grower from Weld County, Colo., writes: "Not a drop of water save a slight rain did my Macaroni Wheat have, yet it yielded 48 bushels to the acre."

## Barley

Sow 80 to 100 lbs. per acre

We aim always to have the best it is possible to procure. We cannot fix a price because of the fluctuations of the market.

Bearded Barley, Beardless Barley and Bald Barley. Write for prices.

### TRY THIS

One rancher whose name we can not recall, told us that he sows his barley early and cuts it three times for hay; each time before the heads appear, and then allows it to head out for grain. Try it.

## Oats

Sow 70 to 100 lbs. per acre

**Texas Red** (Rust Proof)—This is the only variety that is profitable to plant here. We have this on hand during the planting season.

Texas Red Oats—Grown in Texas.

Texas Red Oats—Grown in California. Write for prices.

## Speltz (Emmer Wheat)

Sow 80 to 100 lbs. per acre

A grain for dry lands, introduced from Russia. This is a remarkable grain, and should receive the attention of all farmers. It is a species of drought-resisting wheat, and not inclined to rust. It will produce a fair crop under almost any condition of climate, but grows best in dry prairie regions with hot summers, giving excellent results. Thrives on poor land or stony ground. The Experimental Stations of both the Dakotas report that it resists drought better than oats or barley. All animals eat it green, greedily, and are fond of the straw. No matter how dry the season, speltz is sure to head. You will have grain even if you have but little straw. Sow 80 to 100 pounds per acre very early, same as barley or oats. Price—(\$5.00 per 100 lbs.) f. o. b. here. Write for quantity price.

## Rye (Winter)

Sow 60 to 70 lbs. per acre

Grown extensively for early winter pasture, green manuring, and for the straw, which is valuable for many commercial purposes. Write for prices.

## Flax

If interested write the U. S. Dept. of Agri., Washington, D. C. for Farmers Bulletin No. 785.



## Buckwheat

Sow 40 lbs. per acre

**Silver Hull** Blooms longer and matures earlier than other varieties; grain of a beautiful light gray color with very thin hull.  
Price—(Per lb. 20c postpaid).

**Common Buckwheat** It is now demonstrated that buckwheat is one of the best cover crops to grow during the summer months. The soil is always moist where shaded with buckwheat. Sow the seed any time after April 1st, about 45 pounds per acre. Within ten weeks it will have matured seed; plow under; the seed will within ten weeks mature another crop. Thus with one sowing of seed you can plow under four crops. It will not survive the winter. Therefore it is necessary to sow once a year. When necessary we advise irrigation about time of maturity, and plow under as soon after irrigating as the soil will permit.

We highly recommend the growing of Buckwheat for reclaiming desert land, as it will start a growth and produce a crop under more adverse conditions than any other crop we know of. Price on application.

## Rice

**Rice** growing as an industry is now established in certain sections of California. It is now only a matter of local conditions.

If interested write to United States Department of Agriculture at Washington, D. C., for Farmer's Bulletin No. 688, and Circular No. 97.

The variety, now accepted as the best for California, is the **Wataribune**, an early variety imported from Japan.

Price—(Per lb. 20c prepaid) (10 lbs. 80c) f. o. b. here. Write for quantity price.

## Grow Hemp, Rape, Sunflower and Canary Seed

The high price now prevailing will justify the planting of large acreage to these crops. With conditions that are likely to prevail in Europe beyond the time of planting next season's crop, it is sure the price of bird seed will greatly advance, thus making it certain that it would prove profitable to those who will plant large acreage to any of these crops. Each one of them is easily grown and easily harvested, but plant at least fifty acres, in order that you may have a carload of grain, or unite with your neighbors to grow a carload.

Many of these crops should be planted during December and January.

**Mammoth Russian Sunflower** Single heads measure 15 to 22 inches in diameter, and contain an immense amount of seed, which is highly valued by all farmers and poultry breeders who have tried it as an excellent and cheap food for fowls. It is the best egg-producing food known for poultry. It can be raised cheaper than corn, and is destined to be an article of great value. Every farmer should plant some of the seed in any waste piece of ground any time from early spring up to the middle of July. Three pounds of seed will plant one acre.

Our seed is grown from seed stock bred up by three years' seed selection and will produce heads that will average above twelve inches in diameter.

(1 lb. 25c prepaid). Write for quantity price.

Farmers are not awake to the value of the Sunflower. It occupies the ground only a few months of the year, and is a very ornamental and valuable crop. Every part of the plant may be used. Paper is manufactured from the stalks and oil from the seed and the residue food for stock. It is estimated that 1000 lbs. of dried stems when burned will yield 60 lbs. of ashes, of which 35% is potash. It is a good forage for bees, as the bloom yields abundantly of honey and pollen. The seed is excellent for poultry, and when roasted and ground is a good substitute for coffee.

The same culture applied to corn may well apply to Sunflower, therefore:

Plant Sunflower for the seed for poultry.

Plant Sunflower for the potash contained in the stalks.

Plant Sunflower for a wind-brake.

**Rape** Thousands of sacks of rape seed are imported each year, while it grows wild in some localities of Southern California. It is a profitable and easy crop to grow, and harvest. If interested see us about it. (Per lb. 20c prepaid) (10 lbs. 85c) f. o. b. here. Write for quantity price.

**Canary** This can be grown quite successfully here. It is just as easily grown as barley, and requires the same cultural treatment. Several carloads are imported each year into Los Angeles, all of which have come from Europe. The consumption throughout the United States is enormous. All of this could be grown in California. It is worth fifty to eighty dollars per ton to the grower. If interested, write or see us about it. (Per lb. 20c postpaid). Write for quantity price.

**Hemp** What has been said here of Canary is applicable also to Hemp. It is easily grown and requires about 100 days to mature a crop. It requires sixty pounds of seed to plant an acre, and should be sown in February or March. If interested, write or see us about it. (Per lb. 20c postpaid). Write for quantity price.

## Cotton

Write for quantity price.

1917 crop in Imperial Valley is valued at \$9,000,000.

**Egyptian** A tall long staple cotton, largely grown in the Imperial Valley, and is now one of the standard varieties. Our seed was grown in Imperial County from a thoroughly acclimated strain of Egyptian Cotton.

(Per pkt. 5c) (1 lb. 25c prepaid) (10 lbs. \$1.50 f. o. b. here)

**American Long Staple Peeler** This variety was recommended to Imperial growers by millmen of the Mississippi Delta. It has proven congenial to Imperial County and found to produce a cotton that sells at a special price because it can be used for larger bolt stock. The yield is from 1 to 1½ bales per acre.

(Per pkt. 5c) (1 lb. 25c prepaid) (10 lbs. \$1.50 f. o. b. here)

Write for quantity price.

**Durango** Another popular variety in Imperial Valley (Pkt. 5c) (1 lb. 25c prepaid) (10 lbs. \$1.50 f. o. b. here).

## Improved Evergreen Broom Corn

This Broom Corn grows about eight to ten feet high, stands up well and is entirely free from crooked brush. The fibre is long and fine. Its great value is that it will not get red in the field before it is cut, but it is strictly a green variety of brush, commanding high price. It grows to perfection in all sections of Central and Southern California, back from the coast.

(Per lb. 30c postpaid) (10 lbs. \$1.00 f. o. b. here). Write for quantity price.

**Dwarf Evergreen Broom Corn** is more desirable than the Tall in a locality where a strong wind prevails. It is also less trouble to harvest, while the yield is nearly the same as the Tall variety. Price—(Per lb. 30c postpaid) (10 lbs. \$1.00 f. o. b. here). Write for quantity price.

## Dwarf Essex Rape

Pasture for Hogs and Sheep

There is a need and a place for an extra quick growing green forage crop for use any time during fall, winter and spring and our Dwarf Essex Rape fills that need exactly.

Rape can never become a pest as it belongs to the same general family as the turnip and rutabaga and when planted under favorable conditions of soil and season, it makes an immense crop of green forage, juicy and succulent, and often at a time of year when little green feed is available.

If you have hogs or poultry to fed through the winter you can't afford to be without a rape patch. Once you have one, you will never be without one in the future.

We know of no crop plantable at the time of year suitable for rape that will bring you in so great a return for so little expenditure of time and money for seed.

Every poultry raiser needs at least a small patch of rape to furnish green feed during late fall, winter and early spring. Plant Sept. to Jan. Drill in rows, 3 feet apart.

35 cents per pound, postpaid. In quantity by express or freight, not prepaid, 20 cents per pound.

## Vegetable Oils of Commerce

Much attention is now given to growing such crops which will produce vegetable oils in commercial quantities.

One of the serious drawbacks which discourages this feature of agriculture in California was the lack of local facilities (machinery) for extracting the oils.

The growing of cotton in the Imperial Valley has brought with it this machinery which is being used to extract the oil from the cotton seed. This machinery needs but little alteration to do the work on other material, all of which may be grown in other parts of the country as well as in the Imperial Valley.

The Globe Mills have a plant located in this city, and they have advised us they would handle any oil-producing grains which come to them in sufficient quantities (several carloads). The following are a few of the principal crops grown for this purpose:

Soy Beans, Castor Beans, Peanuts, Essex Rape and Flax.

**A New and Valuable Discovery.**—Mr. Henry Zulauf has discovered that the root of the wild gourd which grows profusely on dry and neglected spots throughout the southwest, contain a high percentage of starch which is of better quality than the starch of commerce. It is easy to estimate the value of this discovery to the homesteaders striving to reclaim desert land, and to make valuable the thousands of acres of such land. If every one living adjacent to such idle land will plant the seed of this gourd, they will soon have facilities for extracting the starch in commercial quantities.



# Grass Seeds for Lawns

The beautiful lawns of Southern California cannot be excelled anywhere in the world. In few places can a new home become so quickly surrounded with luxuriant vines, trees, shrubbery and flowers. This climate will accomplish more in one season than five seasons of Eastern climate. It is a pleasure to plant here, for there is something blooming all the year round. But it requires skill and intelligent aid to direct nature to produce a profusion of beautiful colors at all times.

To keep up the beauty of a lawn it will be necessary to feed the grass well. You cannot expect it to retain that depth and richness of texture and color which characterizes it while young, after the elements of plant food have been exhausted.

In Southern California lawns may be made all the year. The first thing to do in making a lawn is to put the soil into proper condition to receive the seed. More lawn failures are due to insufficient preparation of the soil than to all other causes combined. If the soil is poor and of a sandy, clayey, or adobe nature, and a good rich loam is not available, satisfactory results may be obtained by spading in a liberal quantity of stable manure. Lawn grasses are voracious feeders and for that reason it is desirable to have at least eight to ten inches of good rich soil. Stable manure is most commonly used, especially for sandy soils, as chemical fertilizers usually leach too rapidly.

Unevenness in soil texture and fertility produces unevenness in the growth and color of the lawn grasses, even to the extent of grass dying in patches.

On small home grounds, it is better to have a perfectly level lawn, and in many cases this is a particular advantage in the conservation of water; the water spreading and soaking down evenly over the whole level area instead of running off as fast as applied, as is often the case on sloping surfaces.

Sow about one pound of seed to two hundred square feet of lawn area. This heavy sowing is better than a thin sowing because many weed plants are crowded out by a good thick stand of lawn grass. The seed is sown evenly when the wind is not blowing and lightly raked into the surface.

In many sections of California, mulching the lawn after sowing the seed is a very desirable and oftentimes a necessary practice. The material used for such mulching should be quite fine and light in weight. Old, well-rotted sheep manure is generally used and applied lightly over the surface. After the mulch is applied a thorough watering may be given, and the soil kept moist by daily watering until the seed germinates. As soon as the grass is tall enough to be clipped, the lawn mower should be used. This early clipping tends to check the top growth of the young grass plants, and encourages them to make roots, thus producing a firm sod. After the first clipping a good rolling will tend to smooth the surface and promote better growth. Lawns should be watered thoroughly about two or three times a week during dry weather, preferably in the evening. Light surface sprinklings for a few minutes every evening are worse than nothing, and waste of water.

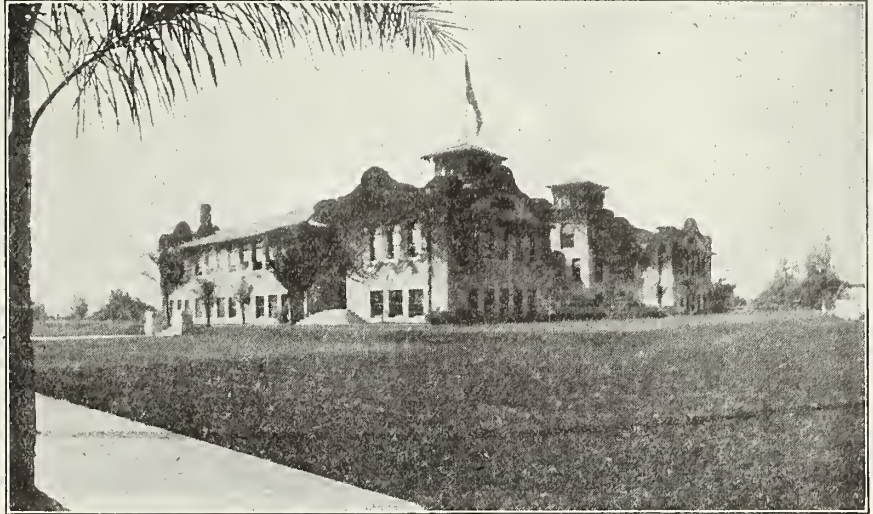
Lawns should not be clipped too short during the hottest and driest months of the year. The knives of the machine should be set high and the short, fine clippings thus produced may be allowed to remain on the lawn where they will quickly work down around the grass plants, and produce a mulch that conserves moisture and protects the crown of the plants from extreme heat. If the grass is allowed to grow too long before cutting, and a large amount of clippings are produced, they are better raked off and taken away.

Weeds will usually give considerable trouble, especially in new lawns, and very often in old ones, and hand weeding seems to be the only reliable remedy. Weeds should be pulled, root and all, as soon as they make their appearance and are large enough to handle. They are also more easily pulled from soft moist soil than from a hard, dry surface.

**Fancy Kentucky Blue Grass.**—The purest and best lawn seed. Produces a lasting and beautiful effect. We sell only the finest quality of this seed. (Per lb. 50c prepaid) (10 lbs. \$3.50 f. o. b. here).

**White Dutch Clover.**—Makes a showy effect much quicker than the Blue Grass. In conjunction with the Blue Grass, however, it forms the finest and closest turf. (Per lb. 80c prepaid) (10 lbs. \$6.50 f. o. b. here).

**Australian Rye Grass.**—Is very strong and quick-growing, producing an immediate effect. Later it becomes bunchy, and after a few years runs out. (Per lb. 30c prepaid) (10 lbs. \$1.75 f. o. b. here).



A Perfect Lawn from Our Seed at the Montebello High School

## Plant Lippia on Your Terrace

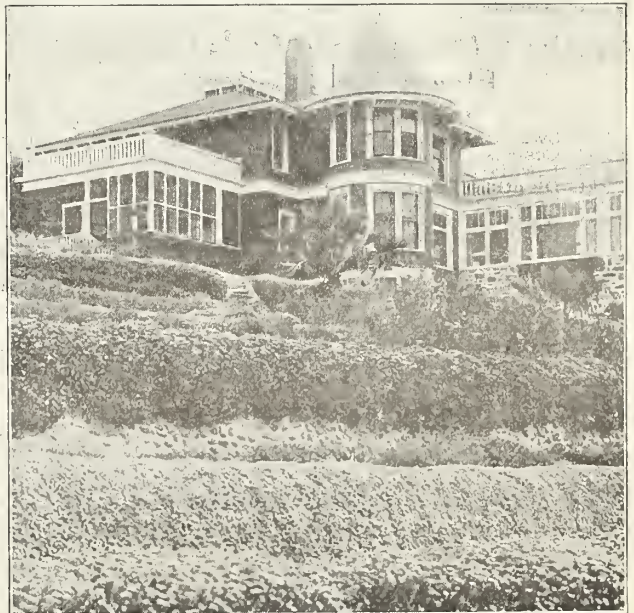
**Lippia Canescens.**—This is a low-growing, trailing plant, producing grayish-green leaves, and quantities of small lilac-colored flowers. It is easily propagated by rooting pieces of sod every twelve inches. It may be mowed or allowed to grow at will. While it will respond to a light application of water, it will thrive and produce a good effect with little or no watering. Unlike Bermuda grass, it will never become a nuisance, and can easily be eradicated at any time. It stands sun and shade, and is well suited for planting in parkings along streets and avenues, and on terraces.

Sold in flats 18 inches square at \$1.00 per flat, f. o. b. here. These flats weigh about 40 pounds, making it expensive to ship. Therefore we often remove the soil and sometimes send only clippings by mail. We have in the season just past filled many orders by mail and by express as far as Florida, with entirely satisfactory results.

**When wanted by mail, send 25c extra for each dollar's worth of Lippia ordered.**

## JUST THE THING FOR THE DESERT

From Mrs. I. C. Johnson, Las Vegas, Nev.: "We are delighted with the Lippia Grass for the cemetery. We think it is the only thing for the desert. The grass was received in lovely condition. Thank you for your advice."



A Lippia Terrace



# The Home Flower Garden



The Flower Garden Makes the Home Beautiful

## Plant Geraniums

Why is this beautiful flowering plant so much neglected? It requires little attention, little watering; it blooms all the year, in sun or in shade, nothing more beautiful for bedding or potting, for hedge or border, for arbor or window boxes. No other plant affords greater variety of flowers, both in type, color and variation of foliage. No other plant is so easily propagated. No other plant grows anywhere in all conditions of soil and climate so luxuriantly as the geranium. Every home in the city or country and every desert home may be surrounded, even buried in the dense cool foliage of the beautiful flowering geranium. Slips will bloom within a month after transplanting.

In order that the planting of geraniums may be encouraged, we are offering slips of various types of geraniums that shall be known by number, as we can not name all of the varieties we have to offer. Each number is described, that you may order the one best suited to your purpose. Some varieties are very scarce, but we make no variation in price, but if we haven't what you order we will substitute another variety that is of similar description.

Send no order amounting to less than 25c.  
**Price—(6 slips 25c) (13 slips 50c) (25 slips 75c) (100 slips \$2.50) postpaid.**

### Aggeler & Musser Seed Co.'s Introductory Flower Seed Collection

#### 10 Packets, 25 Cents, Postpaid

1 Pkt. Sweet Alyssum	.....	\$0.05
1 Pkt. Cosmos, Finest Mixed	.....	.05
1 Pkt. Kochia or Burning Bush	.....	.05
1 Pkt. Dianthus, Superb Mixed	.....	.05
1 Pkt. Four O'Clocks, Mixed	.....	.05
1 Pkt. Nasturtium, Dwarf Mixed	.....	.05
1 Pkt. Pansy, Fine Mixed	.....	.05
1 Pkt. Petunias, Single Mixed	.....	.05
1 Pkt. Poppies, Superb Mixed	.....	.05
1 Pkt. Mixed Sweet Peas	.....	.05

**\$0.50**

For 25 cents we will send one full-size packet each of the above 10 varieties, postpaid. No change will be allowed in this collection. No others will be sold at these prices.

#### SUMMER FLOWERING BULBS

Los Angeles, the city of beautiful lawns, owes much of its popularity to the many flowering bulbs that bloom so profusely and so constantly in this climate, only requiring proper setting at the right time of the year and the right selection to attain the highest perfection of beauty.

Your choice of colors, or variety, per doz. 60c pre prepaid.

Shenandoah—Pink, bronze foliage.  
 King Humbert—Red, bronze foliage.  
 Pennsylvania—Red, green foliage.  
 Indiana—Mottled red and yellow foliage.  
 Iris—White, blue and yellow.  
 Gladiolus—Mixed colors.  
 Tuberose—Pearl or Mexican.

No.	Color	Height	Suitable for
1.	Salmon single	18 inches	Bedding or border
2.	Magenta double	2 feet	Bedding or border
3.	Scarlet double	2 feet	Bedding or border
4.	Red	Dwarf	Ivy Sidewalk or window box
5.	Pure White double	12 inches	Bedding or border
6.	Apple Blossom double	12 inches	Bedding or border
7.	Light center to rose edge single	18 inches	Bedding, border or hedge
8.	Dark red double	10 feet	Hedge, arbor, or to cover fences
9.	Red	Climby Ivy	Sidewalk, fences, around palms
10.	Light Pink single	2 feet	Hedge
11.	Bright Scarlet single	18 inches	Hedge
12.	Red (foliage variegated and white)		Border
13.	Sweet scented		

One slip each of the above assortment, 13 in all, 50c.

### Aggeler & Musser Seed Co.'s Half-Dollar Flower Seed Collection

#### 20 Packets, 50 Cents, Postpaid

1 Pkt. Alyssum, Sweet	.....	\$0.05
1 Pkt. Centaurea (Sweet Sultan)	.....	.05
1 Pkt. Antirrhinum, Mixed	.....	.05
1 Pkt. Asters, Fine Mixed	.....	.05
1 Pkt. Balsam, Rose-Flowered	.....	.05
1 Pkt. Candytuft, Empress	.....	.05
1 Pkt. Canna, Mixed	.....	.05
1 Pkt. Celosia, Dwarf Mixed	.....	.05
1 Pkt. Japanese Morning Glory	.....	.05
1 Pkt. Kochia or Burning Bush	.....	.05
1 Pkt. Dianthus, Superb Mixed	.....	.05
1 Pkt. Lantana, Mixed	.....	.05
1 Pkt. Mignonette, Fragrant	.....	.05
1 Pkt. Dwarf Mixed Nasturtium	.....	.05
1 Pkt. Pansy, French Mixed	.....	.05
1 Pkt. Petunias, Finest Mixed	.....	.05
1 Pkt. Phlox, Grand Mixed	.....	.05
1 Pkt. Poppies, Superb Mixed	.....	.05
1 Pkt. Poppies, Superb Mixed	.....	.05
1 Pkt. Mixed Sweet Peas	.....	.05
1 Pkt. Erbenia, Finest Mixed	.....	.05

**\$1.00**

For 50 cents we will send, postpaid, the above 20 full-size packets of Flower Seed. No changes will be allowed in this collection. No others will be sold at these prices.

There are many annuals the seed of which may at the approach of the rainy season be scattered broadcast upon any preferred place about the premises. The winter rains will cause them to grow luxuriantly and bloom from early spring till far into the summer, with no more care than to pull up the weeds that appear at the beginning.

Here is a list of flowers that will bloom under such conditions: (All of these will reseed themselves.)

A. & M. Collection of Annuals, ten packets, 25c.		
African Daisy Sand Verbena Sweet Alyssum Calliopsis California Poppy	Collection of ten packets, 25c	Shirley Poppy Gaillardia Marigold Gypsophila Portulaca





Just a Jungle of Wild Flowers

If you have a piece of ground you cannot irrigate or have not time to give particular attention, yet you want to have something beautiful instead of unsightly weeds, we advise you to plant our A. & M. Wild Flower Mixture, and you will have a jungle of wild flowers like the picture above. One pound of seed is sufficient to plant an acre. (Pkt. 5c) (oz. 60c) (¼ lb. \$1.80) (½ lb. \$3.00) (lb. \$5.50) postpaid.

**SEPARATE VARIETIES.** We offer the following varieties in individual packets:

**Eschscholtzia californica.** "California Poppy." Annual, 1 to 1½ feet. The most noted of California Wild Flowers. Orange-yellow, with a beautiful glossy sheen. (Pkt. 5c) (oz. 25c).

**Gilia achillaeifolia.** "Blue Gilia." Annual, 1 to 1½ feet high. Small lavender-blue flowers in dense heads on graceful, slender stems. (Pkt. 5c) (oz. 25c) (lb. \$3.00).

**Godetia amoena.** "Farewell to Spring." Annual, 1 to 2 feet high. A slender growing plant, usually found on shady banks. Flowers lilac-crimson or red-pink, often with a dark center. (Pkt. 5c) (oz. 50c) (lb. \$5.00).

**Layia elegans.** "Tidy Tips." Annual, 1 to 2 feet. A yellow daisy, edged with white or cream color. (Pkt. 15c).

**Linnanthus densiflorus.** "California Phlox." Annual, 1 to 2 feet high. Flowers in crowded clusters; pink and purple with yellow throat. (Pkt. 10c) (oz. 50c).

**Lupinus nanus.** "Dwarf Blue Lupine." Annual, 10 to 15 inches high. A very showy plant; flowers rich blue and white, fragrant. (Pkt. 5c) (oz. 35c).

**Mentzelia lindleyi.** "Blazing Star." Annual, 2 to 3 feet. Showy yellow flowers. (Pkt. 5c) (oz. 50c).

**Nemophila insignis.** "Baby-Blue-Eyes." Annual, 4 to 8 inches high. A charming little plant of spreading habit, with clear, azure blue flowers. Prefers shade or partial shade. (Pkt. 5c) (oz. 25c).

**Nemophila maculata.** "Spotted Nemophila." Annual, 4 to 8 inches. White with large deep purple blotch on each petal. Does well in shady places. (Pkt. 5c) (oz. 25c).

**Plants for Window Boxes, Vases and Baskets.** Ageratum, Alyssum, Begonia, Canna, Coleus, Dracaena, Indivisa, Fuchsias, Grevillea, Geraniums, Heliotrope, German Ivy, Lobelia, Mignonette, Myosotis, Maurandia, Nasturtiums, Portulaca, Petunia, Schizanthus, Thunbergia.

## CALIFORNIA, THE LAND OF FLOWERS

There are no more satisfactory flowers than those grown from seed, especially the easily grown and brilliant flowered annuals. The beautiful shrubs and lilies, of course, have their place, but are far more expensive than a paper of seed which will furnish a large number of plants with usually enough for one's garden and some to spare.

This page is intended to aid you in the selection of your seeds that you may have flowers all the year round, and for every purpose.

**Tender or Greenhouse** means the plant will not stand the least frost. All such must be planted late in spring (May) or in a greenhouse.

**Half Hardy** means the plant will stand any light frost, but needs protection against very cold weather. These should be planted in the spring (March and April), not in the fall.

**Hardy** means the plant will stand considerable frost, or practically all we have on the Pacific Coast. These may be planted in the fall or in the spring (October to May). If sown in the fall they will come into bloom earlier than if

sown in spring, even if the plants do not make much progress during the cold weather.

**Annuals** are plants that bloom the first year from seed, and the plant dies after one season. Tender annuals must be sown in spring (April to June) and hardy annuals may be sown in either spring or fall (October to May).

**Biennials** are plants that bloom the second year from seed, and the plant dies after blooming. In California many of these will bloom the first year if sown early. Sow under same conditions as perennials.

**Perennials** are plants that bloom the second year from seed, and the plant lives and blooms during successive years. If sown in early spring (February to April 15) many perennials will bloom the first year from seed. Tender and half-hardy perennials are best sown in spring after frost is over (April 15 to June). Hardy perennials are best sown in the late summer and early fall (July to October) for next year's flowers.

## LIST OF FLOWER SEED FOR SPECIAL PURPOSES

### PERENNIAL PLANTS

Antirrhinum, Aquilegia, Asters (hardy sorts), Bellis, Canna, Campanula, Carnations, Chrysanthemums (hardy sorts), Coreopsis, Delphinium, Dianthus, Digitalis, Gaillardia (hardy), Geranium, Gypsophila, Paniculata, Heliotrope, Hollyhocks, Lobelia (hardy sorts), Matricaria, Myosotis, Pansy, Phlox (hardy), Pinks (hardy), Poppy Iceland, Poppy Oriental, Primrose, Pyrethrum, Sweet William, Verbena, Violet, Wallflower.

### PLANTS FOR BEDDING AND IN MASSES

Adonis, Agrostema, Amaranthus, Antirrhinum, Asters, Bachelor's Button, Balsam, Calceola, Calendula, Calliopsis, California Poppy, Campanula, Canna, Castor Beans, Carnation, Chrysanthemum, Clarkia, Cosmos, Coxcomb, Delphinium, Digitalis, Four o'clock, Gaillardia, Geranium, Heliotrope, Lantana, Larkspur, Linum, Mignonette, Nicotiana, Nigella, Phlox, Petunia, Pinks, Poppy, Salpiglossis, Salvia, Scabiosa, Sunflower (fancy), Stocks, Sweet Sultan, Sweet William, Verbena, Wallflower, Zinnia.

**For Constant and Brilliant Bloom.** African Daisy, Ageratum, Sweet Alyssum, Antirrhinum, Asters in all varieties, Calliopsis, all the dwarf Cannas, Centaurea, Eschscholtzia, Gaillardia, scarlet Geraniums, Marigold, Nasturtium, Pansy, Petunia, Phlox Drummondii, Portulaca, Salvia, Scabiosa, Sweet Peas, Verbena, Double Zinnia.

**Low-Growing Plants for Masses of Color.**—White—Sweet Alyssum, White Ageratum, White Candytuft, White Phlox, Drummondii, White Verbena.

**Blue**—Ageratum, Heliotrope, Lobelia, blue Verbena.

**Red**—Carmine and Crimson Candytuft, Geranium, Phlox Drummondii, Scarlet, and Phlox Dwarf Fireball, Poppy, Verbena.

**Yellow**—Gaillardia, Eschscholtzia, French Marigold and Nasturtium Lady Bird.

**Dwarf Plants for Edgings and Borders.** Ageratum, Alyssum, Dwarf Candytuft, Centaurea, Coleus, Double Daisies, Golden Feather, Little Gem Feverfew, Heliotrope, Lobelia, Mignonette, Myosotis, Pansies, Phlox Drummondii, Pinks, Violets.

**Fragrant Flowers.** Sweet Alyssum, Candytuft, Carnation, Clematis, Paniculata, Honeysuckle, Heliotrope, Lily of the Valley, Lily, Mignonette, Nicotiana Affinis, Pansy, Sweet Peas, Pink, Rose, Sweet William, Ten Weeks Stock, Tuberoses, Verbena, Wallflower.

**Climbing Plants.** Ampelopsis, Cypress Vine, Cinnamon Vine, Dolichos, the Gourd Family, Humulus Japonicus, Honeysuckle, Morning Glories and Ipomoeas, English Ivy, Maurandia, Perennial Peas, Trumpet Vine, Canary Bird Vine, Alyssum, Begonia, Canna, Coleus, Dracaena Indivisa, Fuchsias, Grevillea, Geraniums, Heliotrope, German Ivy, Lobelia, Lantana, Mignonette, Mimulus, Maurandia, Nasturtiums, Portulaca, Petunia, Schizanthus, Thunbergia, Myosotis (Forget-me-not).

**For Cut Flowers.** Antirrhinum, Aster, Carnation, Chrysanthemum, Coreopsis, Cosmos, Dahlia, Gladiolus, Gypsophila, Helianthus, Larkspur, Lupinus, Marigold, Mignonette, Phlox, Salpiglosses, Scabiosa, Stock, Sweet Pea, Sweet William, Sweet Sultan, Verbena, Wallflower, Zinnia.

**For Shady Places.** Anemone, Antirrhinum, Aquilegia, Begonia (tuberous), Double Daisy, Delphinium, Scarlet Flax, Foxglove, Oenothera, Pansy, Polyanthus, Violet.



# FLOWER SEED LIST

See Pages 9 and 10 and Inside Back Cover.



Phlox and Candidissima



Petunia

**ABRONIA (Sand Verbena).**—A hardy annual, trailing in habit, about nine inches high, bearing verberna-like clusters of flowers, which are very fragrant. A native of California. Thrives in dry situations, and is valuable for rock-work or hanging baskets. **Umbellata.**—Rosy lilac. Pkt. 5c.

**ADONIS (Floss Adonis, or Pheasant's Eye).**—A hardy annual of easy culture, growing about one foot high. Leaves fine-cut and feathery; flowers crimson. Seed should be sown in the autumn. Pkt. 5c.

**GERATUM (Floss Flower).**—A hardy annual of easy culture, especially valuable for bedding, as it is literally covered with blossoms all summer. Sow the seed early in the spring, either in boxes to transplant, or out of doors, and thin to four to six inches.

**Blue Perfection.**—Deep blue, one foot high. Pkt. 5c.

**Mexicanum, Imperial Dwarf Blue.**—Eight inches high, flowers blue. Pkt. 5c.

**GROSTEMA (Rose of Heaven).**—A hardy perennial, blooming the first season if the seed is sown in the autumn. Plant grows one to two feet high; flowers resemble Dianthus in bright colors, and are borne on long, slender stems. **Mixed colors,** pkt. 5c.

**LYSSUM (Maritimum).**—A fragrant, hardy annual, having the odor of honey, and bearing spikes of small white flowers in great profusion throughout the summer and autumn. Useful for borders or early bedding flowers. Sow the seed early in spring.

**Common Sweet Alyssum.**—One foot high, very sweet honey fragrance. (Pkt. 5c) (oz. 25c).

**Little Gem.**—Three to four inches high; fine for borders. Pkt. 5c.

**Saxatile.**—A yellowish perennial variety. Pkt. 5c.

**MARANATHUS.**—Hardy annuals, grown especially for their brilliant foliage. **Caudatus (Love Lies Bleeding).**—Light yellowish-green foliage; long, drooping crimson flower spikes. Plants grow three to four feet high. Pkt. 5c.

**IMPELOPSIS, QUINQUEFOLIA.**—See Virginia Creeper.

**ANGEL'S TRUMPET.**—See Datura.

**ANTIRRHINUM (Snapdragon).**—Antirrhinum thrive in almost any soil, and should receive more attention. It is undoubtedly one of the best cut flowers which can readily be grown from seed, while for bedding or borders they are unsurpassed.

**Antirrhinum Double White.**—Quite a new departure in the class of tall, large flowering snapdragons is here offered. Out of the mouth-like aperture in the flowers between the upper and lower lips, emerge abnormal fantastic petals which give a double and beard-like aspect to the very large bloom. Pkt. 15c.

**Majus, Album.**—Tall. Flowers of large size, pure white. Pkt. 5c.

**Majus, Fire King.**—Tall. Resplendent coloring of rich yellow and scarlet crimson. Pkt. 10c.

**Majus, Grandiflora.**—Tall. Mixed; including all the new colors. Pkt. 5c.

**Majus, Queen Victoria.**—Striking variety, sending up numerous long spikes of pure white flowers. Excellent for cutting. Pkt. 10c.

**Majus, Straitum.**—Tall. Spikes of beautiful striped flowers. Pkt. 5c.

**Nanum, Black Prince.**—Semi-Dwarf variety. Extremely rich color, which makes a splendid contrast with the lighter varieties. Pkt. 10c.

**Nanum, Queen of the North.**—Semi-dwarf. An extremely beautiful pure white variety, well adapted for small beds or borders. Pkt. 10c.

**Nanum, Tom Thumb.**—Mixed. Pkt. 5c.

**AQUILEGIA.**—A hardy perennial, growing about two feet high and bearing an immense variety of colors on long, smooth stems.

**California Hybrid.**—Large yellow flowers, orange spurs; an improvement on our native sort. Pkt. 10c.

**Coerulea (Rocky Mountain Blue Columbine).**—Fine deep blue and white; long spurs. Pkt. 10c.

**White, Spurred.**—Pure white with long spurs. Pkt. 10c.

**Single Mixed (A. Vulgaris).**—Pkt. 5c.

**Double Mixed (A. Vulgaris).**—Pkt. 5c.

**Long Spurred Hybrid Mixed.**—Showy. Pkt. 5c.

**Skinneri (Mexican Columbine).**—Very

handsome and quite distinct; spurs an petals long, crimson and light green. Pkt. 10c.

**ARCTOTIC (African Daisy).**—**Grandis.**—Large pearly white Marguerite-like flower, with delicate mauve center surrounded by a narrow golden band. The whole plant is covered with white down. Half hardy annual. Height 2 feet. Pkt. 5c.



Aquilegia Long Spurred

## ASPARAGUS

**Plumosus.**—A tender perennial for green-house or potted plant use, with long, fine feathery foliage. The spray when cut, retain their freshness in water from three to four weeks. Seed start slowly and should be soaked in water before sowing. (Pkt. 10c) (10 seeds 50c).

**Sprengerl (Emerald Feather).**—An early, easily grown, feathery-leaved variety with drooping branches. The best variety for hanging baskets. (Pkt. 10c) (100 seeds 50c).





Asters, Acres of Them

**Snowball.**—A splendid Aster of dwarf symmetrical habit, not more than 12 inches in height. The pure white double flowers are imbricated, of extraordinary size, and are indispensable for exhibitions. Pkt. 10c.

**Triumph.**—Excellent Paeony-flowered Aster, of Tom Thumb habit. Large incurved flowers of dark scarlet. Pkt. 10c.

**Victoria.**—One of the finest classes for exhibition; flowers very large as the petals curve outward instead of folding in; the Victoria makes a splendid contrast to the Paeony flowered varieties. Height, 18 inches. Mixed. Pkt. 10c.

**Queen of the Market.**—One of the earliest blooming varieties, blossoming frequently in July. Of spreading habit, 8 to 10 inches high. Blossoms medium sized, and the petals curve outward. Mixed, pkt. 10c.

**Ostrich Plume.**—Extremely graceful Aster, with large, loose feathery heads, unrivalled for table decoration, flowers double and semi-double. The branching habit makes this a conspicuous border plant. Height, 18 inches. Mixed. Pkt. 10c.



Bells (English Daisy)

Flowers both single and double, in bright colors and variations; are wax-like and very attractive. The individual blossoms floating in a dish of water exhibit their beauty to the best advantage.

**Improved Camellia Flowered.**—In its extraordinary size, perfect form and brilliant colors, this fine strain of balsam surpasses all others. Height, 18 inches. Finest mixed. Pkt. 5c.

**Rose Flowered.**—Handsome double flowers in form resembling a rose. Height, 18 inches, fine mixed. Pkt. 5c.

**Spotted.**—Large semi-double flowers, well adapted for borders, fine mixed colors. Pkt. 5c.

**BACHELOR'S BUTTON.** See *Centaurea*.

**BALLOON VINE, OR LOVE-IN-A-PUFF.**—Climbing annual, with small inferior flowers. The seed pods are curiously swelled or puffed, and are quite attractive. (Pkt. 5c) (oz. 25c).

**BEAN (Scarlet Runner).**—A popular climber; the seed is edible and much esteemed. Flowers scarlet; beans black and red. Pkt. 5c).

**BIGNONIA (Trumpet Vine).**—Magnificent hardy perennial climber, with brilliant scarlet or yellow flowers; a most ornamental and effective covering for walls, houses, etc. 30 feet. Pkt. 5c.

**BORDER PINKS.**—See *Dianthus Plumarius*.

**BELLIS PERENNIS (Double Daisy).**—A hardy perennial, blossoming freely all spring and summer. Plant is about four inches high and is valuable for borders. Is much sown in lawns.

**Extra Double White, or Snowball.**—A clear white variety. Pkt. 10c.

**Double.**—Mixed. Pkt. 10c.

**Double Pink.**—Pkt. 15c.

Our flower seeds are of the best quality, that money and experience can produce.



#### Branching Asters

**Giant Branching.**—The tallest and best florist's variety, and we heartily recommend it as the very best type of Aster we have. The plant grows 18 inches high and about 18 inches in width, and the blossoms, which are large and full-petaled, are borne on long stems or branches. The most satisfactory type of all Asters, since it is not only a showy bedding flower, but owing to its long stems and large blossoms, is valuable for bouquets. Comes into flower late in the autumn. Best colors:

Carmine,	White,
Lavender,	Crimson,
Pink,	Light Blue,
Rose,	Purple.

Mixed—Pkt. 10c.

**AUSTRALIAN PEA VINE (*Dolichos Lig-nosus*).**—A rapid growing evergreen climbing perennial, flowering freely in large clusters of rose flowers. For covering arbors, trellises, etc., they have no superior. Pink (Pkt. 5c) (oz. 25c).

**BALSAM OR LADY'S SLIPPER.**—A tender annual, with brittle stems and foliage. Grows about 12 inches high.

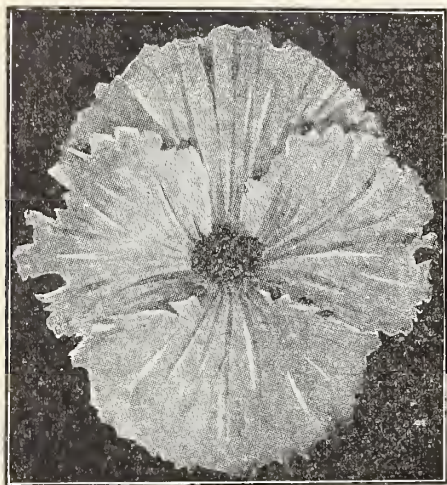


Aster Ostrich Plume Pluto



Balsam



**Begonia Gigantea Crispa**

**BEGONIA.**—Tender perennial, usually grown in the green-house. Some varieties are especially attractive on account of their foliage, but most varieties have exquisitely beautiful wax-like flowers, both single and double. The seed is very small and rather difficult to germinate. It is also very expensive, some strains being worth far more than their weight in gold.

**Begonia Hybrida Gigantea Crispa.**—The flowers are of enormous size, varying in color from pure white to dark purple. The petals are curled wavelike, the bursting buds are folded and ruffled in such a peculiar fashion that they present the appearance of a large double flower. **Pkt. 15c.**

**Fibrous-Rooted Varieties.**—For outdoor culture, having beautiful leaves and bearing clusters of small, waxy flowers. **Pkt. 25c.**

**SALENDULA (Pot Marigold).**—Very hardy annual, one foot high, blooming freely practically the whole year round. Is of the easiest culture and is desirable for rather inferior soils, where less sturdy flowers do not thrive. A medicinal extract resembling arnica is made from the flowers.

**Double Mixed.**—A good mixture of 8 or 10 different shades of yellow, some clear colors and some shaded and striped. **(Pkt. 5c) (oz. 15c).**

**Meteor.**—Large double yellow flowers, striped with orange. **Pkt. 5c.**

**Calceolaria**

**Prince of Orange.**—A fine deep orange. **Pkt. 5c.**

**CALCEOLARIA.**—A tender perennial, used largely in green-houses and conservatories. Bears a large profusion of small, pocket-shaped flowers, many of which are beautifully tigered or spotted. There is a great variety of shades and colors in various markings.

**Grandiflora.**—Large-flowered, self-colored, profuse flowers. **Pkt. 25c.**

**CALLIOPSIS (See Coreopsis).**

**CALIFORNIA POPPY (See Eschscholtzia).**

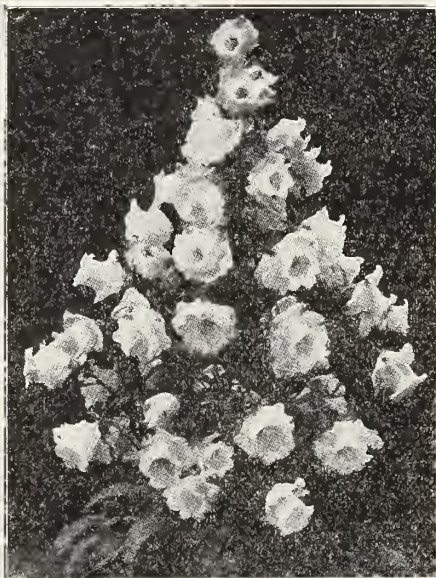
**CANARY BIRD FLOWER (Tropaeolum Canariense).**—A tender, climbing annual of the nasturtium family. Blossoms have curiously winged petals and are light yellow. **Pkt. 5c.**

**CANNA.**—See Bulbs.

**CANNA.**—Mixture of the popular varieties, red and yellow flowers. Plants have large ornamental leaves. **Pkt. 5c.**

**Crozy's Varieties.**—Mixed. New large-flowered and free-blooming sorts. **Pkt. 5c.**

**CASTOR OIL BEAN (See Ricinus).**

**Campanula**

**CANDYTUFT (Iberis).**—A hardy annual, growing about 6 to 18 inches high, according to the variety. The blossoms are borne on variously long spikes, and the newer varieties are quite large, flowering and very fragrant. Of easy culture and valuable for bedding or massing.

**Coronaria Empress.**—Large trusses of pure white flowers, the finest candytuft yet raised. **Pkt. 5c.**

**Umbellata Carmine.**—Large carmine colored flowers. **Pkt. 5c.**

**Umbellata Hybrida.**—Mixed, including the best large flowering varieties. **Pkt. 5c.**

**Umbellata Purpurea.**—Exceedingly showy and effective variety, bearing large spikes of dark crimson flowers. **Pkt. 5c.**

**CANTERBURY BELLS (Campanula Medium).**—A hardy perennial, blooming the second year from seed, or the first if sown early. Grows about three feet high.

**Calycanthema.**—Improved mixed, a combination of the finest and most delicate colors in cultivation, including single, double and cup and saucer varieties. Height 3 ft. **Pkt. 5c.**

**Persicifolia Grandiflora Hybrids.**—Including pure white and various pleasing shades of mauve, blue, purple and some elegant, semi-double flowers. Height 2 ft. **Pkt. 10c.**

**CARNATION (Marguerite Pure White)**

**Medium.**—Choice selection of pleasing colors single mixed. **Pkt. 5c.**

**CARNATION.**—Our strain of these popular flowers is unsurpassable in beauty and variety of coloring, also in the delightful fragrance. For largest, richest flowers, we recommend their culture in pots of rich soil or small, shallow boxes. Cover the seed lightly, and shade from the strong rays of the sun. When the young plants are two or three inches high, they may be transplanted out into small beds. Shade an water them until established. They can be planted out in well-prepared beds, 12 to 18 inches apart. While the weather is cool, the ground should be mulched about 2 inches deep with well-rooted manure. This will not only help to retain the moisture in the ground, but also supply nutriment to the plants. The seed may be sown any time between March and September.

**Chaubaud Earliest French.**—From the ease with which this fine carnation can be flowered as an annual it has attained a popular position, and will continue to hold a foremost place in the garden. The beautiful fringed double flower make a brilliant display of attractive coloring in the open and are greatly prized in borders and for table decoration. Mixed colors. **Pkt. 15c.**

**Early Flowered Vienna Dwarf.**—Extra early flowered strain of compact habit. Invaluable for bedding on account of

**Germania**



the extremely free blooming habit of the plants. Colors varied and flowers mostly double. Pkt. 10c.

**Marguerite, Mixed Colors.**—Very varied; gives a large percentage of fine double flowers. (Pkt. 10c) (½ oz. 20c).



**Celosia Empress**

**Srenadin Scarlet.**—A valuable early-flowering variety coming quite true to color and producing an exceptionally large percentage of sweet scented double scarlet flowers of a most telling color. Pkt. 10c.

**Germania.**—Large flowering double carnation of a deep rich canary yellow. Pkt. 15c.

**Marguerite Pure White.**—An exquisite sweet scented fringed flower of pure white color. Invaluable for bedding or indoor decoration. Pkt. 10c.

**LOSIA (Cockscomb).**—Very ornamental and strong plants, producing magnificent spikes of feathery looking flowers. They succeed well in the garden and make very attractive pot plants.

**Empress.**—A handsome strain, large and compact heads; color splendid crimson. Pkt. 15c.

**Glasgow Prize.**—A greatly improved strain with immense heads borne on sturdy robust plants of dwarf habit. The color is a rich crimson, excellent for borders. Pkt. 15c.

**Pyramidalis Plumosa.**—Handsome pyramidal form bearing long feathery plumes in brilliant colors. Mixed. Pkt. 15c.

**Thompsoni Magnificet.**—A very fine selection of the popular feathered Celosia containing many pleasing shades of color varying from pale yellow to the deepest crimson. Pkt. 10c.

**ONTAUREA.**—A hardy annual, embracing a number of species, some having grown only for their foliage. All varieties grow from 1½ to 2 feet high. Sow the seed early and transplant in March. Excepting the white leaved sorts, all make excellent cut flowers.

**Double Blue.**—A vigorous semi-double plant, having a remarkable lasting quality when cut. Pkt. 10c.

**Candidissima or True Dusty Miller.**—Broad silvery-white foliage useful for bedding. Height 1 foot. Pkt. 15c.

**Cyanus Emperor William.**—The rich, deep blue Bachelors Button. Pkt. 5c.

**Imperialis.**—A magnificent large flowered type exquisitely fringed and delightfully scented. The flowers are at least twice the size of the older varieties and retain their freshness in water a long period and are well adapted for cutting. Height 3 feet.

**Imperialis Pure White.**—Pkt. 10c.

**Imperialis Yellow.**—Pkt. 10c.

**Imperialis Lavender.**—Pkt. 10c.

**Imperialis Mixed.**—Pkt. 10c.

**Moschata or Sweet Sultana.**—A well known type in white, yellow, lavender and purple blossoms.

**Fine Mixed.**—A combination of various colors. Pkt. 5c.

**Suaveolens.**—Bright yellow flowers. Pkt. 5c.

**Odorata Marguerite.**—Deservedly popular, pure white flowers of the Imperialis class. Pkt. 5c.

**Odorata Light Blue.**—Shows sweet-scented flowers of clear mauve color. Pkt. 5c.

**Odorata Mixed.**—Including white and various shades of yellow, mauve, blue and purple. Pkt. 5c.

**CHRYSANTHEMUM.**—There are many widely different classes of this flower in the hardy or garden varieties, both single and double, and the perennial varieties, chief of which is the double or florists' variety, highly prized in the autumn and winter.

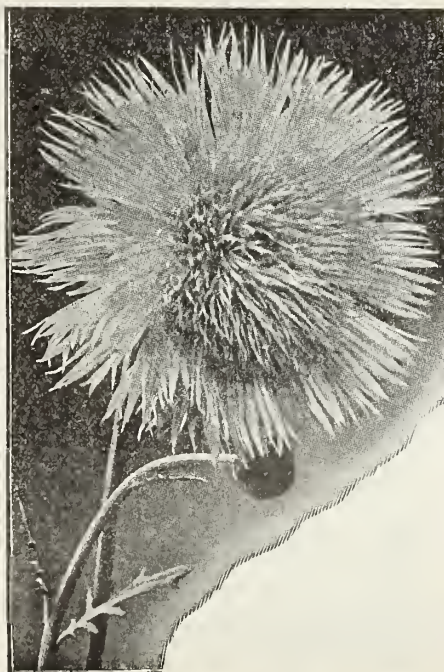
**Bridal Robe.**—Of very compact and upright habit and not exceeding 10 inches in height, double pure white flowers. With their short closely-set petals the flowers recall the finest forms of very large flowering double Daisies. Pkt. 15c.

**Carinatum Hybridum.**—Dwarf double mixed, produce a diversity of colors, including many new and attractive shades. Pkt. 5c.

**Coronarum Compactum Fl. Pl. White Pearl.**—A vigorous-growing class of a branching habit, bearing large, pure white, double flowers, invaluable for cutting as they retain their freshness for a long period in water. Pkt. 10c.

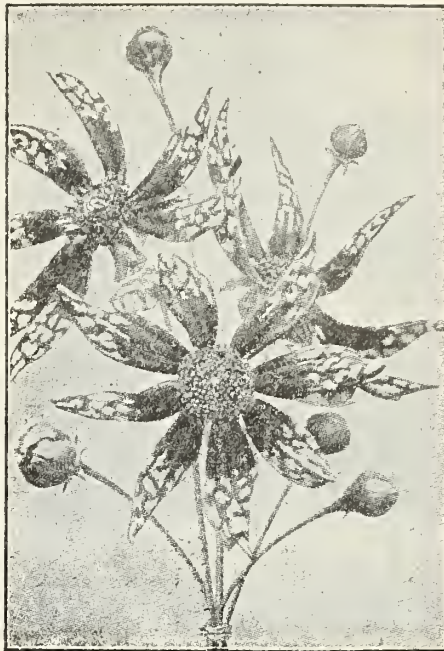
**CALLIOPSIS (Radiata Tiger Star).**—A rich and continuously blooming annual with pretty, peculiar flowers. The leaflets of each flower are twisted like those of the well known Cactus Dahlia. Toward the center they show a vivid reddish brown coloration, the outer part being brilliant golden yellow tinged. The plants reach a height of about 8 inches and form round compact bushes which are throughout the summer literally covered with pretty flowers. Pkt. 10c.

**Thintoria.**—Showy, yellow and brown flowers, height 2½ to 3 feet. Pkt. 5c.



**Centaurea Imperialis**

See Inside Back Cover



**Calliopsis Tiger Star**

**CINERARIA.**—A tender perennial, grown principally in the greenhouse, but can be grown in the garden in summer. Seed should be sown in summer, and the greenhouse requires only moderate heat. Plants grow from 1 to 2 feet high and bear clusters of large, single flowers of bright colors. Will do well in a partly shaded location.

**Cineraria Hybrida Grandiflora.**—The mixture includes every conceivable shade of pink, carmine, crimson and blue, varying to violet, as well as pure white, and blue and white. The flowers are of immense size. Pkt. 35c.

**Hybrida.**—Choice mixed; splendid strain of compact growth, bearing large exquisitely colored flowers. Pkt. 25c.

**CLARKIA.**—A hardy annual of easy culture, growing about 18 inches high and bearing bright rose, white, or purple flowers in great profusion. Native of California. Seed sown in the fall will give early blossoms in the spring. Seed can be sown almost any time.

**Double Mixed.**—Pkt. 5c.

**Single Mixed.**—Pkt. 5c.

**GLIANTHUS DIAMPIERI (Glory Pea of Australia).**—One of the most gorgeous flowers in existence; the flowers are pea-shaped, of a brilliant scarlet color with intense black center; requires a dry, warm soil and little water; 2 ft. high. Soak seeds in hot water before sowing. Pkt. 15c.

**CLEMATIS.** Large Flowered Mixed. A popular hardy perennial climber. An old favorite and justly so, for there are few garden climbers that give more satisfaction. Pkt. 5c.

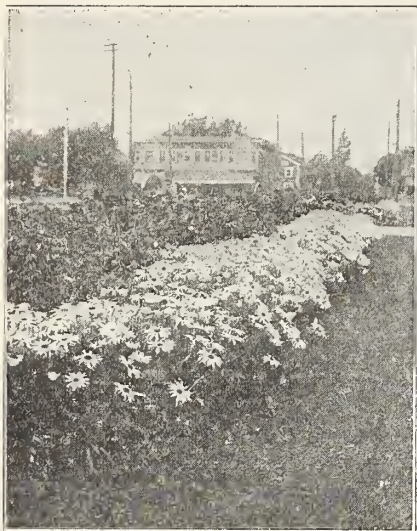
**Panclenata.**—A very fine hardy climber; leaves bright and glossy green; flowers small and hawthorn scented, and just covering the plant when in bloom. Excellent for covering trellises, clematises or fences. Pkt. 10c.

**COBEA SCANDENS (Cup and Saucer Vines).**—A climber of rapid growth; very valuable for covering trellises, arbor, trunks of trees, etc. Will cling to any rough surface, often attaining a height of 30 to 40 feet in one season.

**Scandens Purpura.**—Large bell-shaped purple flowers. Pkt. 10c.

**Scandens Alba.**—Pure white. Pkt. 10c.





Shasta Daisy

**COIX LACHRYMAE** ("Job's Tears").—Curious ornamental grass with broad, corn-like leaves and seeds of a light slate color. Valuable for winter bouquets with everlasting flowers. Strings of handsome beads are made from the seeds. Hardy annual; three feet high. (Pkt. 5c) (oz. 30c).

**COLEUS**.—These beautiful and ornamental foliage plants, producing the most attractive colors are a most interesting subject to grow from seed. To watch the foliage change into a variety of colors as it grows day by day, is wonderful. Pkt. 15c.

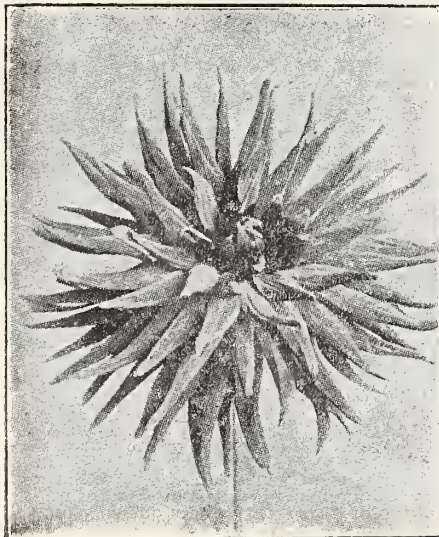
**CONVOLVULUS** (See Morning Glory).

When selecting your flower seeds refer pages 100 and 101.

**COREOPSIS**.—Also known as Calliopsis, will grow luxuriantly in any situation and are most useful, affording a constant supply of richly marked flowers for cutting. All varieties are annuals with the exception of C-Grandiflora.

**Drummondii**.—Large, rich, golden yellow flowers with chestnut-brown centers produced in abundance. Height 18 inches. Pkt. 5.

**Lanceolata Grandiflora**.—Produces a profuse and long-continued succession of large, bold, golden yellow flowers during the whole summer months. Seed sown in March will flower the same season. Height 2½ feet. Pkt. 5c.



Dahlia Cactus

**Single Mixed**.—A selection of the brightest and richest colored large-flowered varieties. Pkt. 5c.

**Cosmos**.—A tender annual, with fine-cut, feathery foliage and large, showy blossoms. The late-flowering of giant type grows 5 to 6 feet high and its blossoms are larger than the early varieties. They bloom late in the fall, or about November 1st.

**Late Giant Crimson**.—(Pkt. 5c) (oz. 25c).

**Late Giant Pink**.—(Pkt. 5c) (oz. 25c).

**Late Giant White**.—(Pkt. 5c) (oz. 25c).

**Late Giant Mixed Colors**.—(Pkt. 5c) (oz. 25c).

**New Gigantic Orchid Flowering Lady Lennox**.—Size, 6 to 7 inches in diameter, with wide overlapping petals of an exquisite shade of shell pink. The flowers are on long stems, making them exquisite shade of shell pink. The flowers are on long stems, making them exceptionally desirable for cutting. Height 5 to 7 feet. Pkt. 10c.

**CYCLAMEN**.—A tender, bulbous perennial, used in greenhouses and window gardens. It is easily grown from seed. Sow in the fall or early spring.

**Persicium Giganteum**.—Flowers of extraordinary size. The leaves are proportionately large, marked with silver-grey. Extra choice mixed. Pkt. 20c.

**Papilio, Butterfly**.—Fringed flowers in all possible colors, as white with rose, rose with scarlet, crimson with violet, etc. Pkt. 25c.

**Persicium**.—Not so large as the Giants, but easier to grow. Choice mixed colors. Pkt. 10c.

**Victoria**.—A truly magnificent strain of Cyclamen, vigorous habit and many flowers; elegant appearance. The lovely margins of the upper part of the fringed flowers displaying the safest and richest colors leads to a flowering plant a most enchanting appearance. In all possible colors—as white with rose, rose with scarlet, crimson with violet, etc., and the coloration of the margin always corresponds with that of the base of the flower. Pkt. 20c.

**CYPRESS VINE** (*Ipomea Quamoclit*).—A tender climbing annual with soft fern-like foliage and small star-like flowers. Choice mixed colors. Pkt. 5c.

**DAHLIA**.—A popular summer and autumn blooming plant; is grown from seed or propagated from the bulbous roots. Sow seed early in hot-beds and transplant as soon as danger of frost is past.

**Cactus**.—Mixed, double, with pointed petals. Pkt. 10c.

**Double**.—Choice mixed colors in great variety and flowers of excellent form. Pkt. 5.

**Single Mixed**.—Seed saved from the choicest varieties. Pkt. 5c.

**Lucifer**.—Early and extremely free-flowering strain of dwarf habit, with flowers of a rich dark red color, showing to great effect above the dark foliage. Makes a most attractive bed. Pkt. 10c.

**DAISY, SHASTA DAISY**.—A fine perennial plant bearing large white single blossoms, with yellow centers. Soak seed in warm water over night before sowing. Pkt. 10c.

**DAISY, DOUBLE** (See Bellis)

**DATURA** (Trumpet Flower).—Tender annual, growing about 3 feet high, flowers large and trumpet shaped.

**Fasduosa Huberiana**.—Choice mixed colors. Pkt. 5c.

**DELPHINIUM** (See Larkspur)

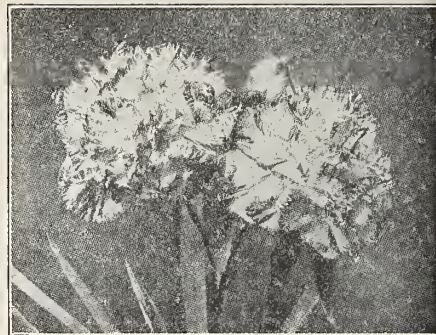
**DIANTHUS, OR PINKS**.—Hardy annuals, about 1 foot high, and bearing beautifully colored single and double blossoms in profusion all summer. Sow seed early in boxes and transplant, or sow in rows where the plants are to remain, and thin.

**Chinensis Double**.—Choice mixed. Largest double flowers of beautiful colors. Pkt. 5c.

**Mixture of Double and Single Pinks**.—This mixture contains the best of the Dianthus varieties. Pkt. 5c.

**Mourning Cloak**.—Large double flowers almost black in color, beautifully edged with white. Pkt. 5c.

**Plumarius** (Grass Pink).—Very hardy producing large fragrant double, semi-double and single flowers of varied colors. Pkt. 5c.



Dianthus Plumarius

**Snow Drift**.—Large, pure white double flowers beautifully fringed. Pkt. 5c.

**DUSTY MILLER** (See Candidissima)

**DIGITALIS, OR FOXGLOVE**.—A hardy perennial, blooming the second year from seed. Grows usually about 3½ feet, although in very rich soil some times 6 feet. The bell shaped flowers are borne on long spikes, and come in shades of purple, lavender, rose and white, all spotted lightly inside the blossom. Thrive best in cool, shady locations. Fine mixed, pkt. 5.

**DIMORPHOTHECA AURANTIACA**.—The Golden Marguerite. A rare and extremely showy annual from South Africa which has become a great favorite on account of its easy culture and beautifully colored flowers. Its Marguerite-like blossoms, produced in great profusion, are 2½ to 2¾ inches in diameter. These are a unique glossy rich orange gold, which brilliant coloring is rendered more conspicuous by the dark disk surrounding the black zone. Pkt. 10c.

**DOLICHOS, OR HYACINTH BEAN**.—Tender, climbing annual. Grows rapidly and is valuable for covering a trellis. Flowers in purple or white; are borne on long stems, the individual blossoms resembling the bean flower, and the ornamental pods resemble bean pods. Sow seed in open ground late in April.

**Lablab**.—Mixed. (Pkt. 5c) (oz. 15c).

**EVERLASTING FLOWER** (See Helichrysum)

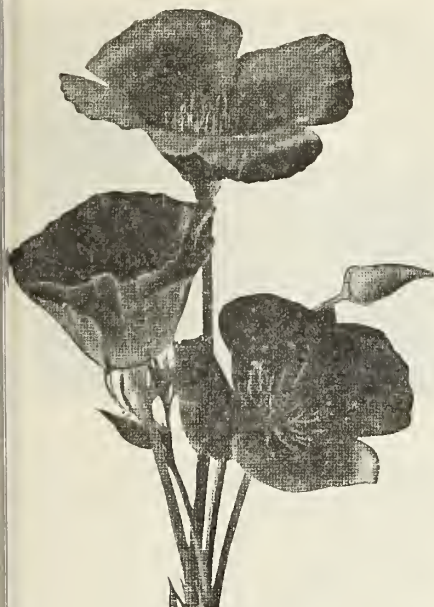
**EVERLASTING PEA** (See Lathyrus latifolius)

**EVENING PRIMROSE** (See Oenothera)



Dimorphotheca Aurantiaca





California Poppy

**ESCHSCHOLTZIA OR CALIFORNIA POPPY.**—A hardy annual with fine-cut feathery foliage and beautiful velvety cup-shaped flowers. Grows from 1 to 1½ feet high and blooms profusely. Seed may be sown in the fall and any time thereafter till April, and blossoms may be had from early in January till late in summer. The beautiful State flower of California.

**Californica.**—The bright, orange-yellow common variety. (Pkt. 5c) (oz. 25c).

**Crocea.**—Pure deep orange. (Pkt. 5c) (oz. 25c).

**Mixture of all varieties.**—(Pkt. 5c) (oz. 25c) (lb. \$2.25).

**RUSH ESCHSCHOLTZIA** (See *Hunae-manaia*)

**LAX** (See *Linum*)

**FEVERFEW** (*Matricaria Capensis*). Called Double Feverfew. A plant growing 18 inches high and bearing profusely pure white, very double flowers. Pkt. 5c. See also *Pyrethrum* for edging varieties.

**FLOWERING SAGE** (See *Salvia*)

**FOXGLOVE** (See *Digitalis*)

**FUCHSIA** (*Lady's Eardrop*).—A well known plant of easy culture in pots for the conservatory, parlor decoration or the open ground. Start seed early under glass. Double Mixed, Pkt. 25c.

**FOUR O'CLOCK** (*Mirabilis*).—A hardy annual of easy culture, growing about 2 feet high. The plant is free flowering, bearing blooms of a great variety of colors and spikes.

**Jalapa Marvel of Peru.**—Mixed. Pkt. 5c.

**FORGET-ME-NOT** (*Myosotis*).—A hardy perennial, growing 6 to 12 inches high. Small star-like flowers are borne in clusters on long stems; blooms the first year if seed is sown early. Thrives best in a cool, moist location.

**Alpestris.**—Blue. Pkt. 5c.

**Victoria.**—Large flowers; bright azure blue with yellow center; plant symmetrical, dwarf and strong grower. Pkt. 10c.

**GAILLARDIA.**—Beautiful show plant, remarkable for the profusion, size and brilliancy of its flowers continuing in bloom from early summer till late in the fall. Excellent for beds, borders, or for cutting. Should be sown where they are to bloom, height 18 inches.

**Grandiflora.**—Single perennial variety of varying shades of reddish brown and yellow. Pkt. 5c.

**Picta Lorenzianna Double Mixed.**—Large heads of bright yellow and red flowers. Very double, with quilled petals, suitable for bouquets. Pkt. 5c.

**Picta.**—Favorite bedding plant, producing throughout the summer numerous yellow and scarlet flowers. Pkt. 5c.

**GERANIUM.**—A half-hardy, perennial, flowering the first year from seed if sown early. A gorgeous flower of numerous shades of color; bearing continuously renders this one of the most popular plants grown.

**Large Flowers of Fancy Show.**—This choice mixture includes many of the newest and finest sorts. Pkt. 25c.

**GERANIUM CUTTINGS.**—See Page 10.



Geranium

**GLADIOLUS.**—Well known magnificent plants, with sword-like leaves and long spikes of flowers of every conceivable color and shade. Many new and rare varieties are produced from seed. Pkt. 15c.



Gaillardia

**Geranium Cuttings.**—See Page 10



Gloxinia Ornamental Foliage

**GLOXINIA.**—Beautiful hot-house plants, with large, bell-shaped blossoms, which come in rich, velvety-deep, and bright colors, some of which are beautifully marked. Sow in the fall or early spring.

**Hybrida Grandiflora.**—Enormous flowers. Pkt. 25c.

**Ornamental Foliage.**—A new Hybrid foliage. The leaves are very large and vary from velvety brown to glossy purple. The enormous flowers, which appear in great profusion, are bright, rosy-carmine, with spotted white throats. Pkt. 25c.

**GODETIA.**—A hardy annual, ten inches high, of compact growth, satiny cup-shaped flowers in deep red, pink and white, shaded and blended. Valuable for bedding. Sow seed early in the year; grows wild in California.

**Duchess of Albany.**—Beautiful glossy satin-white flowers produced in great abundance. Height 1 foot. Pkt. 5c.

**The Bride.**—Lovely white flowers suffused with rose, height 1 foot. Pkt. 5c.

**Lady Albemarle.**—A splendid variety. Flowers large and of intense glowing carmine, crimson, slightly edged with lilac. Height 1 foot. Pkt. 5c.

**Whitneyi.**—Highly effective variety with brilliant carmine flowers. Very freely produced on compact plants height 1 foot. Pkt. 5c.

**Whitneyi Fulgida.**—An extremely showy variety, flowers of a brilliant crimson-scarlet, with white center. Very striking and effective. Pkt. 5c.

**Semi-Dwarf Mixed.**—Including all the finest varieties. Pkt. 5c.

**GOLDEN-GLOW** (See *Rudbeckia*)

**GYPSOPHILA** (*Baby's Breath*).—A hardy annual of easy culture. Grows two or three feet high, and bears a profusion of small star-shaped white and pink flowers.

**Paniculata.**—Fine for bouquets; white flowers; perennial. (Pkt. 5c) (oz. 60c).

**Elegans.**—Annual white. Very largely grown by florists for use in bouquets. (Pkt. 5c) (oz. 35c).

**HELIANTHUS** (See *Sunflower*)

**HELIOTROPE.**—A half-hardy perennial growing four to eight feet high. Small flowers, borne in graceful clusters and very fragrant. Blooms the first season from seed if sown early. Forms a large plant and requires a roomy situation.

**Louise Delaux.**—Flowers rose tinted. Pkt. 10c.

**Queen Marguerite.**—Purple blue. Pkt. 10c.

**White Lady.**—Pure white. Pkt. 10c.

**Finest Mixed.**—A mixture of the ordinary true types. Pkt. 10c.





Helichrysum

**HELICHRYSUM (Everlasting Flower).**—A free-flowering, hardy annual, growing four to five feet high and bearing beautiful straw-like flowers in a great variety of shades and colors. Makes a very handsome dried bouquet. Mixed. Pkt. 5c.

**HIBISCUS.**—A hardy annual, growing about 2 feet high, showing an ornamental class of plants with large, beautiful colored flowers; grows freely in common garden soil.

**Africanus.**—A showy, hardy annual, cream color with rich brown center. Height 2 feet. Pkt. 5c.

**HOLLYHOCK.**—A hardy perennial of upright, stately growth, five to eight feet high. The very double varieties are the most desirable, but the newer, semi-double, fringed types are also very popular.

**Allegheny.**—This unique and beautiful variety produces semi-double flowers about 3 inches across. The petals are crinkled and fringed like crumpled and slashed satin. Pkt. 10c.

**Chater's Superb Mixed.**—Saved from a magnificent collection of fine named double varieties. Pkt. 10c.

**New Annual Mixed.**—Saved from the best trial varieties. Pkt. 10c.



Hollyhock

**HUMULUS, OR JAPANESE HOP.**—A rapid-growing, hardy climbing annual with dense leaves. Will grow 20 to 30 feet in a season.

**Japonicus.**—Bright green foliage. Pkt. 10c.

**Japonicus Variegatus.**—Bright, variegated yellow, white and green leaves. Pkt. 10c.

**HUNNEMANNIA, OR BUSH ESCHSCHOLTZIA.**—Known also as the Santa Barbara Poppy. An erect-growing, tender perennial, about two feet high. Foliage fine-cut, feathery blossoms, beautifully cup-shaped, bright yellow, and about three to four inches across. Stems, long and smooth. Pkt. 5c.

**HYACINTH BEAN (See Dolichos)**

**YSOMOEIA.**—An extensive genus, including many well known garden flowers. Are tender climbing annuals, from 5 to 30 feet long. The seed of several varieties, especially the moon flower, should have the outer shell punctured and then soaked in water for twelve hours or more to germinate it.

**Bona Nox (Evening Glory).**—Rosy lilac flowers, expanding in the evening; of very rapid growth. Pkt. 5c.

**Coccinea.**—Brilliant scarlet flowers, with small foliage. Pkt. 5c.

**Hederacea Grandiflora Alba.**—Large flowers of pure white. Pkt. 10c.

**Learli.**—Violet and blue flowers. Pkt. 10c.

**Mexicana Alba.**—At night and during dull days the plants are covered with an abundance of large pure white flowers, 5 to 6 inches in diameter. Very rapid grower. Pkt. 10c.

**Rubro Coerulea.**—Very large, sky-blue flowers. Pkt. 5c.



**JERUSALEM CHERRY (Perennial).**—A dwarf, branching plant with small oval-shaped leaves, dark green in color, and bearing a great profusion of handsome, bright scarlet berries. The plant grows to a height of two feet, and makes a beautiful hedge, or in pots is a suitable indoor ornament for holiday decorations. Pkt. 5c.

**JOB'S TEARS (See Coix Lachryma).**

**KOCHIA TRICOPHYLLA (Summer Cypress).**—A splendid ornamental annual plant, forming dense oval bushes, 2 to 2½ feet high, of small, feathery, light green foliage. As summer advances this changes to a carmine hue and finally to a fiery red. A very attractive plant at all times. Also called "Burning Bush." Pkt. 5c.

**KUDZU VINE (Pueraria Thunbergiana).** A new climber of great merit. This vine is one of the most rapid climbers there is, growing to 20 feet quickly. Called also Jack-and-the-Bean Stalk. Hardy perennial. Pkt. 10c.



Larkspur

**LARKSPUR, OR DELPHINIUM.**—Beautiful, hardy border perennials with noble spikes of handsome flowers; very useful for cut flowers, etc.

**Cardinale.**—Very beautiful strain with large handsome flower spikes of bright scarlet; height 4 feet. Pkt. 10c.

**Elatum Hybridum Double Mixed.**—Large, handsome flower spikes, including the best of the new double and single varieties; height 3 feet. Pkt. 5c.

**Formosum.**—Rich blue flowers, exceedingly effective in borders; height 3 feet. Pkt. 5c.

**Hybridum Single Mixed.**—Very showy strain. Pkt. 5c.

**Sulphureum.**—Long spikes of charming clear, yellow flowers; quite a distinct color among perennial larkspur; height 3 feet. Pkt. 15c.

**LANTANA.**—Tender perennial, growing from 2 to 3 feet high, bearing Verbenalike clusters of flowers, in orange, white, rose and other colors, excellent for bedding.

**Choice Mixed.**—Pkt. 5c.



Japanese Morning Glory

**IMPERIAL JAPANESE (See list under Morning Glory).**

**IPOMEA QUAMOCUIT (See Cypress Vine).**

**JAPANESE HOP (See Humulus Japonicus).**



**LATHYRUS LATHIFOLIUS** (Everlasting Pen).—A hardy, perennial climber of great beauty with elegant sweet pea-like flowers in great profusion; height 6 to 8 feet.

Red—Pkt. 5c.

White—Pkt. 5c.

Fine Mixed.—Pkt. 5c.

**AVATERA** (Tree Mallow).—A showy hedge plant, growing about 6 feet high and covered with shrimp-pink, cup-shaped flowers. Sow in May in the open ground and thin young plants to 12 inches apart.

**Trimestric Alba**.—Beautiful large, glossy, pearly-white flowers. An effective contrast to the pink (Rosea). Valuable for borders. Pkt. 5c.

**Trimestric Rosea**.—Magnificent variety of a brilliant rosy-pink. Extremely useful for cutting, the blooms remaining in beauty for a long period. Pkt. 5c.

**INUM, OR SCARLET FLAX**.—A hardy annual, about one and one-half feet high. Of slender and graceful appearance, with smooth stems and bright red flowers, which are borne in great profusion. Can be sown early out of doors, and thrives well in good soil.

Rubrum.—Pkt. 5c.

**LOVE-IN-A-MIST** (See *Nigella*).

**LOBELIA**.—A hardy annual and perennial. The annual grows four to six inches high, is of compact growth, and literally covered with small bright flowers. By cutting back the plants during the summer and giving plenty of water they may be kept in flower all summer. Used for ribbon work and borders or hanging baskets.

**Bernard's Perpetual**.—Flowers brilliant ultramarine blue, with a pure white mark at the base of each of the two lower petals; height 6 inches. Pkt. 5c.

**Cardinalis Queen Victoria**.—Beautiful perennial variety with vivid scarlet flowers and metallic crimson foliage; height 2 feet. Pkt. 15c.

**Crystal Palace**.—Undoubtedly the finest dwarf blue Lobelia for bedding. Plants very compact, profusely covered with rich blue flowers. Height 4 inches. Pkt. 10c.

**Hybrida Amanda**.—Blossoms, which open rosy-like and pass to a deep amaranth red, an intense shade from which the sharply defined pure white eye stands out in telling contrast. Pkt. 15c.

**Royal Purple**.—Dark, bronzy green foliage, flowers rich purple-velvet with clear white eye. A splendid variety for ribbon borders, window boxes, etc. Height 6 inches. Pkt. 5c.

**LOVE LIES BLEEDING** (See *Amaranthus Caudatus*).



Lobelia Crystal Palace

**MARIGOLD**.—A hardy annual, in dwarf and tall varieties, growing from 6 inches to 3 feet high. The flowers are various shades of yellow and brown. The tall varieties are very valuable for large bedding or background work, and the dwarf varieties for borders.

**African Tall Double Orange**.—Beautifully formed flowers of gigantic size and bright color; height 2½ feet. Pkt. 5c.

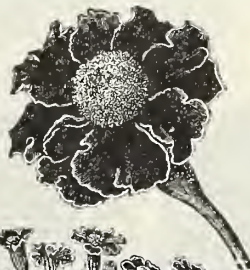
**French Tall Striped**.—The flowers have a yellow ground, with rich brown markings; height 2 feet. Pkt. 5c.

**Gold Ring**.—The color is a dark velvety brown, gracefully surrounded by a distinct gold ring. The compact, bushy plant flowers abundantly and is more lasting than any other annual. Pkt. 10c.

**Tall Double Lemon**.—A charming shade of color; height 2½ feet. Pkt. 5c.

**Tall Double Mixed**.—A combination of the best varieties; height 2 feet. Pkt. 5c.

**Dwarf Double Mixed**.—Profuse flowering, and well adapted for a bedding display in autumn; height 1 foot. Pkt. 5c.



Marigold Gold Ring

**MATRICARIA** (Double Feverfew).—Bushy perennial garden plant, bearing quantities of white and yellow double button-like flowers; useful for cutting.

**Golden Ball**.—Very striking double golden yellow flowers; height 1 foot. Pkt. 10c.

**Silver Ball**.—Dainty, milk-white, fully double flowers, which make a pretty contrast with Golden Ball. Pkt. 10c.

**MARVEL OF PERU** (See *Four O'Clock*).

**MIGNONETTE**.—Hardy annual, growing 6 to 12 inches high and bearing pyramid-shaped spikes, exceedingly fragrant. Sow in the fall for early blossoms in the spring. Valuable for potting, bedding or border. The flowers are not attractive except for their fragrance.

**Allen's Defiance**.—Long spikes of whitish flowers and compact growth. Pkt. 10c.

**Goliath**.—Robust growing variety with enormous spikes of red colored flowers; height 15 inches. Pkt. 10c.

**Machet**.—A dwarf compact variety, with large stubby spikes covered with copper-red flowers, etc. Pkt. 5c.

**Sweet Scented** (*Reseda Odorata*).—Pkt. 5c (oz. 25c).

**Victoria**.—Flowers of a deep red color, well formed spikes; height 1 foot. Pkt. 5c.

**MINA LOBATA**.—A fine annual climber which grows very rapidly to a height of 20 or 30 feet in a season. The leaves are of good size and dense, and the flowers are freely borne in clusters; orange red. Pkt. 10c.



Mimulus (Monkey Flower)

**MIMULUS**.—A half hardy perennial, growing from 6 inches to 1 foot high. Blooms freely and exists in a large variety of colors. For gardens in a moist, shady situation. Blooms first year from seed if sown early.

**Cardinalis**.—Scarlet flowered perennial; 18 inches high; useful for a border; free flowering. Pkt. 10c.

**Moschatus, or Musk Plant**.—Fragrant plant with small yellow blossoms, spotted lightly with brown. Pkt. 5c.

**Tigrinus, or Monkey Flower**.—Large flowers of several colors, and spotted. Pkt. 10c.

**MOMORDICA** (*Balsamina*) (**Balsam Apple**).—A climbing annual, growing about 10 feet long. Has graceful and ornamental foliage, yellow flowers and warted golden yellow fruit, with large carmine-red seeds. Balsam Apple and Balsam Pear are climbers which thrive in hot locations, and are much planted around Bakersfield. Pkt. 5c.

**Charantia, or Balsam Pear**.—Same as the Balsam Apple, but fruit is pear-shaped. Pkt. 5c.

**MOONFLOWER** (See *Ipomea Grandiflora Alba*).

**MORNING GLORY** (*Convolvulus Major*) (See also, *Ipomea*).—Free flowering, beautiful climbers with rich and varied colored flowers, very useful for covering lattice work, verandas, etc., where they are exceedingly effective.

**Imperial Japanese**.—(Pkt. 5c) (oz. 25c).

**Major Tall Mixed**.—(Pkt. 5c) (oz. 15c).

**Minor Dwarf Mixed**.—A beautiful hardy bedding and border plant, attaining a height of about 1 foot. (Pkt. 5c) (oz. 15c).

**MOURNING BRIDE** (See *Scabiosa*).

**MUSK PLANT** (See *Mimulus Moschatus*).

**MYOSOTIS** (See *Forget-Me-Not*).

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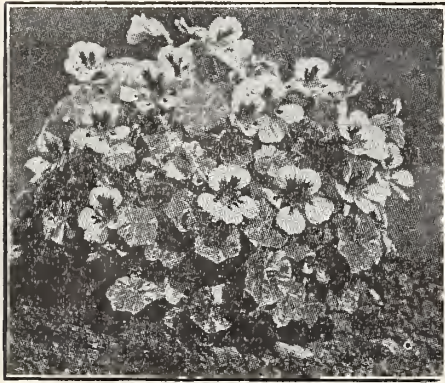
We have endeavored to make this catalog one of much interest to you, and request that you do not destroy it until you get our 1919 book.

On pages 9 and 10 you will find some hints and suggestions, and on page 73 you will find much assistance in making your selection of seeds. On the inside back cover page you may learn when to plant the different varieties.

See the pages on Fertilizers and Insecticides, for you will need both in the successful growing of Flowers.

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Nasturtium Dwarf

**NASTURTIUMS (Culture).**—To grow Nasturtiums well and secure a fine display of flowers, it is necessary that the soil in which they are grown be very poor and dry, otherwise a superabundance of foliage will be produced to the exclusion of the flowers.

**Dwarf or Tom Thumb Mixed.**—Annual, 8 inches to one foot tall; useful for bedding and borders, flowering through the summer and also through the winter in location where they are not cut by frost. (Pkt. 5c) (oz. 15c).

**Giants of Calif. Mixed.**—This mixture is composed of the finest and most distinct varieties in this grand free flowering type. (Pkt. 5c) (oz. 15c) (¼ lb. 50c).

**NEMOPHILA, OR LOVE GRASS.**—A hardy annual about six inches high. Has small, cup-shaped blossoms about one inch in diameter, in white and shades of blue.

**Insignis Alba.**—A pure white flowered variety. Pkt. 5c.

**Insignis (Baby Blue Eyes).**—Sky blue, with white eyes. Pkt. 5c.

**Maculata.**—White, with each petal spotted violet at tip. Pkt. 5c.

**NICOTIANA, OR FLOWERING TOBACCO.**—A half hardy annual, growing 3 feet high, with slender tubular flower. Belongs to the tobacco family. Requires plenty of room in the garden.

**Affinis.**—White, and very fragrant. Pkt. 5c.

**Grandiflora Purpurea.**—Reddish-purple flowers. A robust ornamental variety, excellent for sub-tropical garden, height 5 feet. Pkt. 5c.

**Sanderacea.**—A new, large, flowering type, with various bright-colored blossoms. Pkt. 10c.

**NIGELLA (or Love-in-a-Mist).**—A hardy annual, one foot high, with finely cut foliage. Oddly shaped blossoms in blue and white, and curious seed pods. Of easy culture.

**Miss Jekyll.**—Long stemmed flowers which are of a clear corn-flower blue elegant foliage, height 18 inches. Pkt. 5c.

**OENOTHERA (or Evening Primrose).**—An attractive hardy perennial border plant of dwarf compact habit, producing an abundance of bright showy flowers, in white, pale yellow, rose, etc. Of very easy culture, preferring a light dry soil.

**Fine Mixed.**—Height 6 inches. Pkt. 5c.

#### PENTSTEMON

**Hartwegi Hybrida Mixed.**—The large, Gloxinia shaped blooms vary from pure white, pink, rose and crimson to mauve and purple, including many which are beautifully edged. Hardy perennials. Height 2 feet. Pkt. 10c.



## SUPERB PANSIES

Pansies thrive best in a moist, shady location and in rich loamy soil. Seed should be sown in the autumn for early spring blossoms, or can be sown early in the year for good flowers later in the spring. The plants must be transplanted twice in order to get the largest flowers; once from the seed box to a chosen bed, and again to the open garden. This is important for large size pansies; use manure liberally. The blossoms are usually larger in the spring and again in the fall, and while they bloom freely all summer, the blossoms are small during the hot months.

**Benary's Non Plus Ultra.**—The richest mixture ever sent out. Contains the Blotched and Masterpiece varieties. Pkt. 25c.

**Bridesmaid Giant.**—Shades of white shining rose, blotched. Pkt. 15c.

**Bugnots Superb Blotched.**—Very beautiful class, of enormous flowers with broad blotches, many having the two upper petals finely lined, showing a great diversity of handsome and rare colors. Pkt. 15c.

**Cassiers Large Flowered Blotched.**—The largest flowered class of blotched pansies. An incomparable strain, producing many beautiful and rare varieties. Pkt. 15c.

**Giant Eros.**—This grand novelty produces very large flowers of a deep velvety brown color, with a broad golden yellow margin. The back of each bloom has the same broad margin as the front side, while the dark velvety center is shining through. Pkt. 15c.

**Emperor Frederick.**—Dark red, bordered with orange scarlet. Pkt. 10c.

**Emperor William (Ultramarine Blue).**—Of fine texture, very showy. Pkt. 5c.

**English Mixed.**—The old faced pansy plant of compact habit. Pkt. 5c.

**Faust (King of Blacks).**—Large, well formed, glossy black flowers. The plants are compact and bloom for a long time. Pkt. 10c.

**French Large Flowered Mixed.**—An excellent strain. Pkt. 10c.

#### EXTRA FINE GIANT-FLOWERED PANSIES.

**Giant Pale Blue.**—Gigantic blooms of a delicate mauve-blue shade with paler center, freely produced on compact plants. Pkt. 10c.

**Giant White (Black Eye).**—Large well formed flowers with black center. Pkt. 10c.

**Giant White.**—Very large, well formed white flowers with dark purple eye. Pkt. 10c.

**Giant Yellow (Black Eye).**—Large handsome flowers of a rich yellow with black eye. Pkt. 10c.

**Giant Prince Henry.**—Dark blue, very large beautiful flower. Pkt. 10c.

**Pansy Psyche.**—Not many of the pansy varieties have such a winning appearance as Psyche. The characteristic five, velvety, violet blotches are surrounded by a broad white edge. It is an ideal exhibition or market pansy. Pkt. 15c.

**Giant Curled Andromeda.**—A charming strain of pansy with elegantly frilled flowers, some so full as to appear double. The color is a very delicate apple-blossom, generally showing a soft lavender blue or rosy lilac hue, rendered still more effective by a somewhat darker veining. The blooms are of immense size. Unusually true to color from seed. A decided acquisition. Pkt. 20c.

**Lord Beaconsfield.**—Purple-velvet upper petals shading off to a light tint. Flowers large. Pkt. 10c.

**Madam Perret.**—Striking and distinct variety of unusually compact habit. The lower petals are generally of canary-yellow, white or rose-pink marked with purple or crimson. The upper petals bright red and deep purple or outlined with a margin of white. Pkt. 10c.

**Odier Cassier Bugnot Mixed.**—This mixture is unsurpassed. Contains the very best of each of the varieties. Pkt. 25c.

**Odier Mixed.**—Extra choice; very fine strain of three and five blotched show pansies. Pkt. 10c.

**Parisian Large Stained Mixed.**—Beautiful improved strain of Trimardeau pansies, mostly white ground and fine blotched varieties. Pkt. 10c.



Pansy Psyche



**President Carnot.**—Odier type, white petals with violet blotch. **Pkt. 15c.**

**Striped and Mottled.**—Large flowers handsomely striped and mottled. **Pkt. 10c.**

**Primaardeau or Giant Mixed.**—A very showy class of vigorous compact growth, flowers of an enormous size, finest strain. **Pkt. 10c.**

**Triumph of the Giants.**—Very large frilled blooms. A great variety of rich and beautiful colors. Very showy class. **Pkt. 25c.**

**Violet Purple.**—Handsome flowers of a rich purple. **Pkt. 10c.**

**PASSION FLOWER.**—A hardy perennial climber, very satisfactory for immense growth, as it will cover a porch or small cottage in one season.

**Alba.**—Pure white. **Pkt. 10c.**

**Coerulea Grandiflora.**—Sky-blue. **Pkt. 10c.**

**Passiflora Edulis.**—See page 7



Passion Flower

**PETUNIA.**—A splendid race of plants, rich and varied colors, and profuse flowering with their charming and tender looking flowers, they are very beautiful for groups in the open. For pot culture also, Petunias are almost unsurpassed. Sow seed early in spring, scatter thinly on an even surface and barely cover the seed with sand. If intended for the open ground plant out into a frame to be kept till planting-out time. If for pots, pot singly into small pots in strong rich soil mixed with sand and shift as the plants grow larger.

**Flaburianta.**—The most imposing Petunia yet introduced. Large finely imbricated flowers of a great diversity of charming colors. **Pkt. 20c.**

**Grandiflora Single Mixed.**—Exceedingly handsome and free flowering, containing the greatest variety of colors, yellow throated, veined and blotched. Very large flowers. **Pkt. 15c.**

**Hybrida Fine Mixed.**—The best Petunia for massing in beds and borders, yielding a profusion of brilliantly marked flowers. **Pkt. 5c.**

**Superb Double Fringed Mixed.**—One of the finest strains of Petunias in existence. The double flowers are very large, full and symmetrically formed, having the edges of the petals beautifully fringed. **Pkt. 35c.**

**PHLOX DRUMMONDII. Grandiflora.**—A hardy annual, growing from six inches to one foot high and bearing beautiful, soft-petaled and brilliantly colored flowers all spring and summer. Fine for bedding and massing. Sow seed in the fall for early flowers.

**Cuspidata (or Star Phlox Stella).**—A flower a color which strongly resembles that of the popular dwarf sort Fireball. Excellent for dwarf groups and for pots. Height, 1 foot. **Pkt. 15c.**

**Drummondii Grandiflora Alba.**—Pure white flowers, very large and perfectly formed. Height, 2 feet. **Pkt. 5c.**

**Drummondii Fireball.**—Habit similar to the Snowball; color brilliant red; flowers profusely. This and Snowball are two of the most effective varieties of Phlox in existence. Height, 1 foot. **Pkt. 10c.**

**Drummondii Dwarf Mixed.**—A selection of brilliant colors, strongly recommended for beds, edgings or borders. **Pkt. 5c.**

**Isabellina.**—A splendid strain of Phlox, flowers of a soft primrose color. Height, 2 feet. **Pkt. 10c.**

**Finest Mixed.**—**Pkt. 10c.**

**Perennial.**—Indispensable for border plant. Seed saved from the finest bright colored flowers. Height, 2 feet. **Pkt. 10c.**



Poppy Charles Darwin

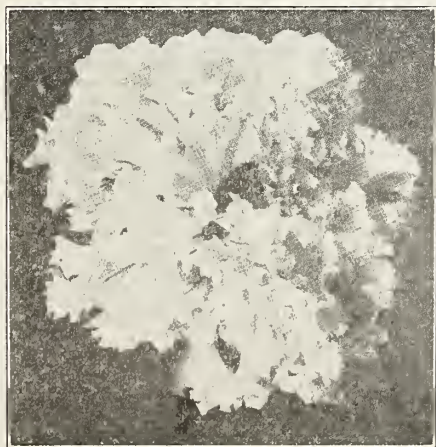
**POPPIES.**—The different varieties of poppies are always favorites for outdoor display and the cultivation of them being so extremely simple entitles them to a place in every garden. Seed should be sown where the plants are intended to flower, because it is difficult to transplant them with any measure of success. During March or April sow in rows or groups and thin to about 1 foot apart.

**Admiral.**—Large, pure white, single paeony flowered variety, with band of brilliant scarlet around the top. **Pkt. 5c.**

**Carnation Double Mixed.**—Choice assortment of brilliant colors. Flowers very double and well fringed. (**Pkt. 5c**) (**oz. 20c.**)

**Charles Darwin.**—Handsome flowers of a rich dark purple, with a large velvety black spot starting from the base of each petal. **Pkt. 15c.**

**Glaucum (Tulip Flowered).**—Beautiful variety, producing flowers of the most vivid scarlet, effective for beds or masses. **Pkt. 5c.**



Double Fringed Petunia



Poppy Shirley

**King Edward.**—With this new novelty, we have added to the rich collection of single annual Poppies growing 2½ feet in height, deep scarlet, shaded crimson of gorgeous effect, which is heightened by the large black blotch adorning each petal for half its length from the base. From this sable hue the yellow antlers stand out in appropriate contrast. **Pkt. 15c.**

**Mikado.**—Effective double poppy with deeply lacinated petals; white and rose above. **Pkt. 5c.**

**Nudicaule (Ice Land Poppy).**—A beautiful class of dwarf Perennial Poppies, which if sown in March will flower the same year. The blossoms are bright yellow, borne on slender stems about 1 foot high. Useful for cutting and the flowers exhale an agreeable perfume. **Pkt. 5c.**



Poppy King Edward

**Shirley.**—The most charming poppy in cultivation. The blossoms are bright and showy and include an almost endless variety of colors, from pure white, pink, terra cotta, salmon, chamois, and rosy carmine, to brilliant crimson, many of the flowers being beautifully flaked or edged with white. (**Pkt. 5c**) (**oz. 25c**)

**Virginia Poppy.**—This new large flowering poppy of the annual class produces beautiful large, white flowers with fringed soft pink edge. Cut flowers in vases, etc., are of quite a charming effect, and are for this purpose especially recommended as they are very lasting when cut in the morning, as a color-showing bud. **Pkt. 10c.**



**Romneya Coulterii**

**ROMNEYA COULTERII** (California Tree Poppy).—Also well known as the Matilija Poppy; perennial. It is of value as a cut flower, lasting well in water, and its delicate primrose-like perfume is most acceptable. They never lose the crumpled folds that in the case of most poppies betoken newly-opened state. Flowers are four to five inches across, pure white, with a fine bunch of yellow stamens, resembling white, single peonies. **Pkt. 10c.**

**LARGE PRIMULA, or CHINESE PRIM-ROSE.**—Charming profuse blooming plants, indispensable for winter and spring decoration in the house. For a succession of blooming plants sow the seed from March to May and again in July or August. In planting, cover the seed lightly and keep moist, transplant when the second leaf appears and keep repotting the plants as they grow and increase in size.

**Auricula.**—Choice mixed, saved from all the best sorts, embracing many delicate and brilliant shades. **Pkt. 15c.**

**Chinensis Fimbriata Mixed.**—Beautiful fringed flowers of gigantic size and great substance. Foliage elegantly curled. **Pkt. 25c.**

**Chinensis Stellata or (Star Primula) Mixed.**—A distinct and beautiful class; will be found indispensable for general decoration work. **Pkt. 25c.**

**Pyrethrum**

**Japanica Mixed.**—Bright and snowy flowers, borne in whorls and stems 6 to 8 inches long. **Pkt. 10c.**

**PYRETHRUM.**—Handsome plants of easy culture. Invaluable for bedding purposes, especially for ribbon borders.

**Golden Feather.**—Fine compact habit of growth, with bright yellow foliage, largely used for edgings and ribbon borders. Height, 9 inches. **Pkt. 10c.**

**Roseum.**—A hardy perennial, with red petaled flowers radiating from a golden yellow center. Buhach, or insect powder, is made from the dry leaves. **Pkt. 5c.**

**Selagionides.**—A distinct form with moss-like foliage, quite as bright in color as the Golden Feather and does not flower until late in the season. Height, 6 inches. **Pkt. 5c.**

**PORTULACA.**—Beautiful race of dwarf plants for rock work or dry sunny locations, bearing glossy cup-shaped blossoms in brilliant colors.

**Double Mixed.**—Saved from the finest flowers only, and will produce a large percentage of doubles. **Pkt. 10c.**

**Single Mixed.**—Large flowers. **Pkt. 5c.**

**RICINUS** (Castor Oil Plant).—Effective for semi-tropical gardens. Easily raised from seed, and should be grown in deep, rich soil.

**Richius Gibsoni.**—A very fine variety with rich, lustrous, red foliage. Height, 5 feet. **(Pkt. 5c) (oz. 15c).**

**RUBBECKIA** (Bicolor Superba).

**Coneflower.**—Fine free flowering annual variety, forming a dense bush and producing in great abundance on long stems its bright flowers. The disc is brown, the flowers golden yellow, with large variety brown spots at the base. Very effective and useful for cutting. **Pkt. 10c.**

**Lacinata.**—A single, bright yellow perennial plant, blossoming in the late summer. Four to six feet tall. The double form, known as Golden Glow, is propagated by division of the root crown. **Pkt. 10c.**

**SALPIGLOSSIS**

**Fine Mixed.**—Highly ornamental half-hardy annual with large, veined, funnel-shaped flowers; much prized for cutting; very showy in beds or border. A bed of these beautiful plants is one of the most striking features of the garden during July and August. **Pkt. 5c.**

**SALVIA, OR FLOWERING SAGE.**—A tender perennial blooming the first season from seed and growing two or three feet high. The blossoms are borne on long stems in racemes or spikes, and are fragrant.

**Patens.**—Valuable for bedding; bright blue flowers. Height, 2½ feet. **Pkt. 10c.**

**Splendens.**—Gorgeous plants, with numerous flowers, which are displayed with striking effect against the deep green foliage. A bed of this flower is exceedingly beautiful during the autumn. Height, 2 feet. **Pkt. 5c.**

**SCARLET FLAX** (See Linum).

**SCABIOSA, OR MOURNING BRIDE.**—The tall flowers are especially adapted for cutting and massing in the garden. Annual (self-sown in California), 2½ to 4 feet high. These new flowers are double clear to the center, covering the thimble-shaped cone.

**Tall Double Mixed.**—Immense flowers; very double. **Pkt. 5c.**

**Dwarf Double Mixed.**—Beautiful colors; very effective. Height, 12 inches. **Pkt. 5c.**

**Caucasia.**—A highly decorative variety. Flowers large and of a soft mauve or heliotrope color. Height, 2 feet. **Pkt. 10c.**

**Snowball.**—Large head of lovely pure white flowers. Height, 3 feet. **Pkt. 5c.**

**SCHIZANTHUS.**—Very beautiful and interesting annuals. Indispensable for green house and conservatory decoration or outdoor culture.

**Wisetonensis.**—Flowers large and of various pleasing shades. Height 2 feet. **Pkt. 15c.**

**Finest Mixed.**—A mixture of all the most showy varieties. Height 2 feet. **Pkt. 5c.**

**SENSITIVE PLANT.**—An interesting plant, the leaves of which close when touched; elegant foliage; flowers pink. **Pkt. 5c.**

**California Double Sunflower**

**SUNFLOWER (Helianthus).**—Stately, hardy annuals of easy culture. The smaller flowering varieties being also useful for cutting.

**California Double.**—Large, massive, bright yellow flowers, height 6 feet. **Pkt. 5c.**

**Double Dwarf.**—Very attractive variety covered with an abundance of golden yellow flowers, height 3 feet. **Pkt. 5c.**

**Miniature.**—Very popular Sunflower of branching habit, producing in great abundance, small golden yellow flowers with black centers. Exceedingly valuable for cutting. Height 4 feet. **Pkt. 5c.**

**New Red Sunflower** is a very apt description of this new variety. The plant is of freely branching habit, with well-shaped dark-centered flowers of bright chestnut red, merging to yellow at the tips of the petals; height 6 feet. **Pkt. 15c.**

**SNAPDRAGON** (See Antirrhinums).

**STATICE** (Sea Lavender).—Splendid hardy perennials, with tufted grass-like foliage, from which issue long stems terminating with large globular heads of rose pink flowers. Sometimes called sea pinks.

**Suworowi.**—Flowers bright rose color. Valuable for winter bouquets. **Pkt. 5c.**

**STOCKS** (Ten Weeks' Stocks, or Gilliflowers; Levoje).—The Stock is one of the many popular plants used for bedding. For brilliancy and diversity of color, fragrance, profusion and duration of bloom it is unsurpassed. Hardy annual.

**Apple Blossom.**—The long spikes of apple-blossom flowers are produced on plants of compact habit. **Pkt. 10c.**

**New Red Sunflower**



**Empress Elizabeth.**—Carmine pink spikes of double flowers. Height, 15 inches. Pkt. 10c.

**Giant Almond Blossom.**—Quick growth with flowers of a very large size. The color is white shaded carmine. Pkt. 15c.

**Giant Beauty of Nice.**—Branching; excellent for winter if sown in July or August. Delicate flesh pink spikes of double flowers. Height 2 inches. Pkt. 10c.

**Giant Crimson King.**—Long spikes, of a rich crimson color. Pkt. 15c.

**Giant Queen Alexander.**—Similar to the above except in color, which is rosy lilac. Pkt. 15c.

**Mont Blanc.**—This is indeed a wonderfully fine type of the largest white sweet-scented flowers. This variety can be cultivated either as a summer or as a winter stock, and owing to its unrivalled freedom of bloom will be found excellent for bedding or for culture. Pkt. 20c.

**White Lady (White Empress Elizabeth)** New, massive spikes of strikingly large and very double snowy white flowers. Height 20 inches. Pkt. 25c.

**PERPETUAL, OR BRANCHING.**—Cut and come again, 10 weeks; are especially valuable during summer and winter for cut flowers. They grow out numerous side branches, all bearing very double fragrant flowers.

**Brompton or Winter Finest Mixed.**—These varieties give a large percentage of double flowers of a pleasing combination of colors. Plants of a compact habit. Pkt. 10c.

**Dwarf German Ten Weeks.**—Finest mixed brilliant colors only. Pkt. 10c.

**Giant Perfection Ten Weeks Mixed.**—Branching habit; very large and full double flowers, the plants growing to a height of 15 to 18 inches. Pkt. 10c.

**Large Flowering Dwarf Ten Weeks Mixed.**—A fine type of the ordinary large flowered strain. A large percentage of the flowers coming double. Pkt. 10c.

**Princess Alice.**—Beautiful white flowered. Excellent for cutting. Pkt. 10c.

**Perpetual or Branching Mixed.**—Finest assorted colors. Pkt. 10c.



Branching Stock

## SWEET PEAS

We are headquarters for strictly high grade sweet pea seed; they are the best that money can buy.

**Culture.**—Sweet peas will thrive on most any kind of soil if enriched with well-rotted manure, but a heavy clay soil produces best results. Ample arbor should be provided to attain highest perfection of bloom. The vines will grow eight feet tall and become a solid mass of bloom, which should be cut every day to prolong the life of the plant. Apply from time to time some Blood Meal fertilizer, and water abundantly, but see that there is good drainage, that the roots do not rest in wet, sour earth.

### SWEET PEAS—SPENCER TYPE

**American Spencer.**—Scarlet striped with white. (Pkt. 10c) (oz. 25c).



Othello Spencer

**Asta Ohn, Spencer.**—Soft pinkish lavender, self. Very large and wavy. (Pkt. 10c) (oz. 25c).

**Black Knight, Spencer.**—Deep maroon, very large. (Pkt. 10c) (oz. 25c).

**Clara Curtis, Spencer.**—Very large, wavy cream or light primrose. (Pkt. 10c) (oz. 25c).

**Countess Spencer.**—"Hybrid," a very large flowered variety, a lovely shell pink but sports various shades of pink, rose and lavender. Flowers usually four on a stem. (Pkt. 10c) (oz. 25c).

**Dainty Spencer.**—White with pink wavy edges. (Pkt. 10c) (oz. 25c).

**Elfrida Plerson Spencer.**—Light pink or white edged and shaped. (Pkt. 10c) (oz. 25c).

**Florence Morse Spencer.**—Delicate blush with pink margin; very large and one of the best Spencer varieties. (Pkt. 10c) (oz. 25c).

**Etta Dyke Spencer.**—Very large wavy, pure white. (Pkt. 10c) (oz. 25c).

**Geo. Herbert Spencer.**—A large Spencer rose crimson, suffused with magenta. (Pkt. 10c) (oz. 25c).

**Helen Lewis Spencer.**—Bright orange salmon. Very large, beautifully waved. (Pkt. 10c) (oz. 25c).

**King Edward Spencer.**—Most beautiful and richest of all the red shades. This large beautiful waved flower stands by itself, a bright crimson scarlet. (Pkt. 10c) (oz. 25c).

**Loyalty Spencer.**—Bright blue striped on white. (Pkt. 10c) (oz. 25c).

**Margaret Madison Spencer.**—Beautifully waved, light blue. (Pkt. 10c) (oz. 25c).

**Mrs. Hugh Dickson Spencer.**—Beautifully wavy apricot on cream. (Pkt. 10c) (oz. 25c).

**Mrs. Rautzahn Spencer.**—A beautiful blending of straw color, tinted with bluish pink and shading to apricot and rose at edges. (Pkt. 10c) (oz. 25c).

**Othello Spencer.**—Deep rich maroon, very dark and adapted for many attractive combinations. (Pkt. 10c) (oz. 25c).

**Queen Alexandra Spencer.**—The nearest approach to a true scarlet. (Pkt. 10c) (oz. 25c).

**Spencer Mixed.**—A splendid mixture of all the different Spencer types. (Pkt. 10c) (oz. 25c).

### SELECTED GRANDIFLORA TYPES IN SEPARATE SHADES

**Blanche Ferry.**—Rose standard, tinted with light pink. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Brilliant Blue.**—A dark stain of navy blue. (Pkt. 5c) (oz. 20c) (¼ lb. 45c).

**Dorothy Eckford.**—White, large shell-shaped. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Helen Pierce.**—Clear blue marbled on ivory white, frequently called Gloxiniflowered on account of its speckled effect. (Pkt. 5c) (oz. 20c) (¼ lb. 45c).

**Henry Eckford.**—Very large orange scarlet. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Hon. E. Kenyon.**—A fine large primrose yellow. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**King Edward, Seventh.**—Bright showy scarlet. (Pkt. 5c) (oz. 20c) (¼ lb. 45c).

**Lady Grisel Hamilton.**—Delicate silvery lavender. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Miss Willmott.**—Bright orange pink showing veins of deeper pink. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Othello.**—Deep maroon, very large, finest type. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Prima Donna.**—The most popular clear pink hooded. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Prince of Wales.**—Popular rose colored. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Queen Alexandra.**—The nearest approach to a true scarlet. (Pkt. 5c) (oz. 15c) (¼ lb. 40c).

**Mixture representing all shades.**—Pkt. 5c (oz. 15c) (¼ lb. 30c) (1 lb. \$1.00).



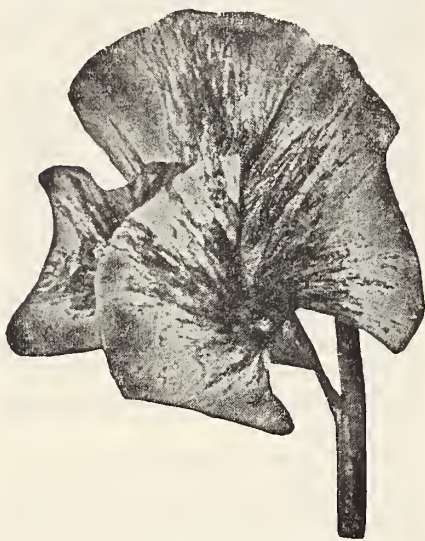
Queen Alexandra



**UNWIN TYPE**

**A. J. Cook.**—Large mauve blue with waved standard. (Pkt. 5c) (oz. 25c).

**E. J. Castle.**—Fine carmine rose, waved standard. (Pkt. 5c) (oz. 25c).



Countess Spence

**Frank Dolby.**—Fine pale mauve self, with wavy standard. (Pkt. 5c) (oz. 25c).

**Gladys Unwin.**—Large frilled standard and open waves, pretty pale pink shade. (Pkt. 5c) (oz. 25c).

**Nora Unwin.**—Large frilled white flower. (Pkt. 5c) (oz. 25c).

**CUPID OR DWARF SWEET PEAS.**—The Cupid varieties are very showy and splendid for bedding. Height six inches. Plant the seed six inches apart. Mixed.—(Pkt. 5c) (oz. 25c).

**WINTER FLOWERING SWEET PEAS.**

A valuable race of early flowering sweet peas, which from a September sowing will give an abundance of blooms from Christmas onward. On account of their delightful perfume, sweet peas are particularly welcome during the days of winter.

**A. & M. Xmas Dark Blue.**—(Pkt. 5c) (oz. 25c).

**A. & M. Xmas Lavender.**—(Pkt. 5c) (oz. 25c).

**A. & M. Xmas Pink and White.**—(Pkt. 5c) (oz. 25c).

**A. & M. Xmas Red.**—(Pkt. 5c) (oz. 25c).

**A. & M. Xmas Soft Pink.**—(Pkt. 5c) (oz. 25c).

**A. & M. Xmas White.**—(Pkt. 5c) (oz. 25c).

**A. & M. Xmas Mixed.**—(Pkt. 5c) (oz. 25c).

**Perennial or Everlasting** (See Lathyrus).



Sweet William

**SWEET SULTAN** (See *Centaurea Moschata*).

**SWEET WILLIAM** (*Dianthus Barbatus*).

A hardy perennial blooming the second year from seed. Grows one to two feet high and bears its flowers in clusters, at the end of a stiff stem. The individual flowerets are handsomely colored and marked. It makes a beautiful bedding plant, and is of easy culture.

**Single Varieties, Mixed.**—More attractive than the double. (Pkt. 5c) (oz. 50c).

**Double Varieties, Mixed.**—Pkt. 5c.

**THUNBERGIA** (or Black-eyed Susan).

A hardy climber, growing about four feet long, and valuable for low fences or hanging baskets. Prefers a sunny situation. Blossoms are buff, orange or white, with dark centers. Mixed. Pkt. 5c.

**TROPAEOLUM CANARIENSIS** (See Canary Bird Flower).

**VERBENA.**—A half hardy trailing perennial of easy culture. It is well known as a bedding or border plant, and the improved large flowered and fragrant strains make it a handsome cut flower for low vases.

**Mammoth Flowered, Mixed.**—(Pkt. 10c) (¼ oz. 35c) (oz. \$1.25).

**Mammoth Rose Queen** (new).—Large brilliant rose. A splendid bedding plant. Pkt. 20c.

**Pink Shades.**—Mammoth strains of rose and pink shades. (Pkt. 10c) (¼ oz. 35c) (oz. \$1.25).

**Pure White.**—Mammoth strain. (Pkt. 10c) (¼ oz. 35c) (oz. \$1.25).



Verbena Rose Queen

**Purple and Blue Shades.**—Mammoth strain. (Pkt. 10c) (¼ oz. 35c) (oz. \$1.25).

**Scarlet Defiance.**—Brilliant scarlet. (Pkt. 10c) (¼ oz. 35c) (oz. \$1.25).

**VINEA, or Madagascar Periwinkle.**—A tender perennial, with ornamental foliage. Blooms freely the first year from seed. The trailing blue Vine or Myrtle never seeds.

**Mixed.**—Rose, Crimson, white, etc. Pkt. 5c.

**VIOLETS.**—Hardy perennials, blooming freely throughout the summer and autumn. Of easy culture.

**Viola Cornuta Purple.**—Fine, rich, purple. Pkt. 10c.

**Viola Cornuta White.**—Pure white flowers, freely produced. Pkt. 10c.

**The Czar.**—Large, fragrant, deep violet flowers. Pkt. 10c.

**Princess of Wales.**—Largest flowering deep blue. Pkt. 10c.

**Single, Sweet-scented.**—Pkt. 10c.

**VIRGINIA CREEPER** (*Ampelopsis Quinquefolia*).—Perennial climber. Large leaves which color in the fall; also bears clusters of dark fruit; flowers inconspicuous. Very ornamental and easily raised from seed. Height, 30 feet. (Pkt. 5c) (oz. 50c).

**VIRGINIA STOCKS.**—A hardy annual, growing about 9 inches high; can be had in continuous bloom by sowing the seed at frequent intervals during spring and summer.

**Red and White Mixed.**—(Pkt. 5c) (oz. 15c).

**WALL FLOWER.**—These delightfully fragrant flowers are indispensable for every garden. Height, 18 inches.

**Double Mixed.**—Pkt. 10c.

**Single Mixed.**—Pkt. 5c.

**WISTERIA.**—A tall, rapid-growing vine, flowers. The glorious blossoms, radiant in their inherent ornamental splendor, are profusely borne in long drooping clusters in mid-spring and gleam in soft tones of violet-purple.

**Chinensis.**—Violet purple. Pkt. 10c.



Zinnia Grandiflora Robusta Plenisssima

**ZINNIA.**—For gorgeous summer and autumn display, there is nothing that can equal in effectiveness the improved, compact-growing, large-flowering Zinnias; grow only 2 feet high and bear flowers of immense size and of the most brilliant colors.

**Elegant Single Mixed.**—Pkt. 5c.

**Giant Golden Yellow.**—Pkt. 15c.

**Haageana (Golden Star).**—Pkt. 10c.

**Giant Pink.**—Pkt. 10c.

**Giant Purple.**—Pkt. 10c.

**Giant Rose.**—Pkt. 10c.

**Giant Scarlet.**—Pkt. 10c.

**Giant White.**—Pkt. 10c.

**Dwarf Double Mixed.**—A valuable class, only about fifteen inches high, very free blooming; flowers as large as the ordinary double Zinnia. Pkt. 10c.

**Double Giants** (*Grandiflora Robusta Plenisssima*).—The largest variety in existence. The blossoms are globe-shaped, very large and numerous colors. Plants are taller than other varieties.

**Mixed.**—Pkt. 10c.

**GARDEN HELPS**

See list of agricultural books, page 14. *California Garden; Flowers, Shrubs, Trees and Vines*, by Wickson. \$1.60 postpaid.

*Garden Beautiful in California*, by Brauntun, \$1.10 postpaid.

See pages 9 and 10 for hints and suggestions.

If interested in a vegetable garden, see pages 11 and 12.

Read page 13. It is interesting.

Do not destroy this book. It contains much valuable information that is needed every day.

This book is an abbreviated encyclopedia of agriculture.



# Tree and Shrub Seeds

## EUCALYPTUS FUTURE TIMBER OF CALIFORNIA

We issue a pamphlet of instructions how to grow the trees from seed. The pamphlet is free to all who are interested in Eucalyptus. All prices on tree seeds are prepaid.

We sell Eucalyptus nursery stock. Small trees 15 to 20 inches tall, grown in flats of 100 trees each of the following named varieties: *Tereticornis*, *Rostrata*, *Globulus* and *Corynocalyx*. Price—(\$1.50 per flat of 100 trees) (\$12.50 per 1000 trees) f. o. b. here.

**Globulus (Tasmania Blue Gum)**—Well known. One of the most useful of all and a very rapid grower, planted in warm countries on account of its malaria destroying qualities; the wood partakes of a very high polish resembling polished hickory when finished; also valued for wagon work; as for fuel it is one of the best, easily sawed and split; height, 150 ft. (Pkt. 15c) (oz. 50c) (lb. \$5.00).

**Corynocalyx (Sugar Gum)**—Very ornamental and useful. Highly valued in this vicinity because it stands more drought than any other variety we know of. Timber very durable and is used for railroad ties, telephone poles, etc.; height, 100 feet. (Pkt. 15c) (oz. \$1.00).

**Robusta (Swamp Mahogany)**—Thrives best on low grounds especially near the coast; is remarkably hearty. Greatly used in this section of the country for avenue planting; height, 100 feet. (Pkt. 15c) (oz. 60c) (lb. \$6.00).

**Rostrata (Red Gum)**—Well known. A rapid grower. It will grow under a great variety of climates. The timber is unsurpassed for durability, and it is used in furniture, vehicles, agricultural implements, manufacturing. Also used for railroad ties, street paving blocks, and ship building; height, 200 feet. (Pkt. 10c) (oz. 50c) (lb. \$5.00).

**Rudis (Desert Gum)**—This tree is noted for its toughness, being used as an avenue and wind break, withstanding winds, heat and cold; height, 100 feet. (Pkt. 20c) (oz. \$1.00) (lb. \$10.00).

**Tereticornis (Gray Gum)**—A rapid grower and erect. Wood durable and useful for shingles, flooring, piles, bridge work and street paving blocks, boat building and wheelwright work. It is also a good honey producer; height, 200 feet. (Pkt. 15c) (oz. 75c) (lb. \$7.50).

## Cypress

**Macrocarpa (Monterey Cypress)**—A California native, and one of the most desirable of evergreens; extensively used for hedges and wind breaks; height, 50 feet. (Pkt. 10c) (oz. 20c) (lb. \$2.00).

**Sempervirens (Italian Cypress)**—A European variety growing very erect, branches parallel with the trunk; deep green color. Very desirable for cemeteries and arches; height, 60 feet. (Pkt. 10c) (oz. 30c) (lb. \$3.00).

**Plus Canariensis (Canary Island Pine)**—A handsome tree, or robust growth, with bright green foliage; growing almost as rapidly as the Monterey Pine; height, 100 feet. (Pkt. 10c) (oz. 35c) (lb. \$3.50).

**Insigula (Monterey Pine)**—A very fine pine; native of California, being particularly well adapted to our coast countries, thriving in almost any kind of soil; height, 100 feet. (Pkt. 10c) (oz. 35c) (lb. \$3.50).

**Lambertiana (Sugar Pine)**—The tallest of all California pines, presenting a very attractive appearance when young. Its timber is the most valuable of all our native pines; height, 150 feet. (Pkt. 10c) (oz. 35c) (lb. \$3.50).

**Sequoia Gigantea (California Big Tree)**—The largest of all trees, probably the longest lived; rising like a tapering pyramid. The lower branches sweep the ground; an excellent ornamental tree, either for the coast or interior; height, 300 feet. (Pkt. 15c) (oz. 75c).

**Sempervirens (California Redwood)**—Well known throughout the world for its famous redwood timber. Very ornamental and a rapid grower; of tapering pyramid habit; does remarkably well in any part of California; used for lawns and parks; height, 200 feet. (Pkt. 10c) (oz. 50c) (lb. \$5.00).

## Acacia

The Acacias are all natives of Australia and Tasmania. The wood is valuable, they are all of rapid growth, and produce their various shades of yellow flowers in great profusion. For quick growth and shade-affording purposes, we know of no better tree. We specialize the *Melanoxylon* (Black Acacia), *Floribunda* (abundance of flowers) and the *Baileana*.

**Acacia Baileyana**—A very ornamental tree with glaucous green foliage. Flowers yellow, in racemes 3 to 4 inches long. One of the most beautiful of the Acacias for lawn and park planting; height, 20 feet. (Pkt. 10c) (oz. 50c) (lb. \$5.00).

**Cultriformis (Knife Leaved Acacia)**—Yellow bloom. A beautiful species and of distinct character, forming a large shrub, with glaucous green leaves. When in bloom the plants present a splendid appearance on the lawn; height, 10 to 15 feet. (Pkt. 10c) (oz. 35c) (lb. \$4.00).

**Dealbata (Silver Wattle)**—With beautiful silvery foliage; very ornamental for sidewalks and lawn planting; flowers canary yellow, fine for cut flowers; keeps well; height 40 feet. (Pkt. 10c) (oz. 35c) (lb. \$3.50).

**Floribunda**—An abundant bloomer and ornamental; very valuable for lawn, park, sidewalks; height, 20 feet. (Pkt. 10c) (oz. 40c) (lb. \$4.00).

**Lophantha (Crested Wattle)**—One of the most rapid growing for first temporary shelter; good for beach or dry places; height, 20 feet. (Pkt. 5c) (oz. 15c) (lb. \$1.25).

**Melanoxylon (Blackwood)**—A well uniformed tree. Being

planted very extensively for sidewalk ornamentals, attaining a height of 50 feet. (Pkt. 10c) (oz. 35c) (lb. \$3.50).

## Conifera--Cedar

**Libani (Cedar of Lebanon)**—A magnificent tree for lawn decoration; height, 75 feet. (Pkt. 10c) (oz. 50c) (lb. \$5.00).

**Cryptomeria Elegans**—A small, dense tree, with glaucous green foliage, changing in autumn to bronzy crimson color, which it retains through the winter. (Pkt. 10c) (oz. 50c) (lb. \$5.00).

**Japanica (Japan Cedar)**—Large, slender tree, with a tapering trunk, covered with a reddish brown bark; thrives under any conditions; height, 75 feet. (Pkt. 10c) (oz. 30c) (lb. \$3.00).

**Juniperus Virginica (Red Cedar)**—A well-known ornamental tree, usually of pyramidal form and having beautiful red hard wood. Its timber has an aromatic fragrance and is very useful; height, 60 feet. (Pkt. 10c) (oz. 25c) (lb. \$2.50).

## Palms

**Chamaerops Excelsa (Windmill Palms)**—Native of China and Japan. Leaves fan-shaped, deeply cut. This is the hardest palm we have, and although it is not such a rapid grower as some, it makes a fine lawn palm and an excellent sidewalk palm; height, 20 feet. (Pkt. 5c) (oz. 10c) (lb. \$1.00).

**Corypha Australia (Australia)**—One of the handsomest of the Fan palms; the fan-like leaves are dark green, supported upon brown petioles, which are armed at their edges with stout spines; hardy in Southern California. (10 seeds 10c) (100 seeds 75c).

**Phoenix Canariensis (Canary Island Palms)**—The most graceful and the handsomest of our hardy palms; leaves pinnate and of a deep, dark green color; one of the most effective palms for a lawn and worthy of the attention of all admirers of the palm family. (10 seeds 10c) (100 seeds 75c).

**Washington Filifera**—The well-known California Fan Palm, which first originated in San Bernardino county; may be seen throughout all Southern California; attains a height of 60 to 80 feet; always a large bunch of leaves hanging close to the trunk. (Pkt. 5c) (oz. 10c) (lb. \$1.00).

**Washingtonia Robusta**—This is a very distinct type from the preceding, although the leaves have the same shape and drooping tendency. (Pkt. 5c) (oz. 25c) (lb. \$2.50).

## Miscellaneous

**Camphor Officinalis (Camphor Tree)**—A symmetrical and ornamental tree, thriving in poor soil; bright green foliage; extensively planted throughout Southern California as an avenue tree, also making a nice ornament for the lawn. This tree is a native of Japan and China. From this tree they extract the camphor of commerce. Attains a height in its native country of 50 feet. (Pkt. 10c) (oz. 25c) (lb. \$2.50).

**Grivillea Robusta (Silk Oak of Australia)**—A well-known shade tree throughout California, with fern-like foliage and flowers of orange color; and of rapid growth; height 75 feet. (Pkt. 10c) (oz. 40c) (lb. \$4.00).

**Jacaranda Mimosaeifolia (Brazilian Jacaranda)**—A handsome tree with fern-like foliage. Flowers blue or light violet, blooming in clusters early in the summer months. Greatly used as a street tree; very hardy in this vicinity; height 40 feet. Pods containing from 20 to 40 seeds. (5c each) (per doz. 40c).

**Magnolia Grandiflora**—A native of the Southern states. One of America's most noble evergreens; foliage is thick, with a nice bright, waxy green; foliage underneath of brown velvet color; flowers of pure white; of immense size and fragrance; height, 75 feet. Fresh seed during the fall and winter. (Pkt. 10c) (oz. 35c) (lb. \$3.50).

**Schinus Molle (Mexican Pepper Tree)**—This ornamental tree has been one of the greatest attractions of Southwest California, with light feathery foliage and bright scarlet berries during the winter months. (Pkt. 5c) (oz. 10c) (lb. 75c).

**Melia Umbraeformis (Texas Umbrella Tree)**—Of a very rapid growth; the top forming in the shape of an umbrella and very dense; greatly recommended for the hot and dry country; height, 40 feet. (Pkt. 5c) (oz. 10c) (lb. \$1.00).

**Robinia Pseudacacia (Black Locust)**—A rapid growing tree with spreading branches; a valuable timber tree, lumber used for various mechanical purposes; flowers white appearing in spring; height 70 feet. (Pkt. 5c) (oz. 10c) (lb. 75c).

**Wild Sour Orange**—We have on hand from January until May fresh seed from abroad. (Per gallon \$6.00) (per bushel \$45.00) f. o. b. here. Price subject to market change.

**Sweet Orange Seed**—California grown. (Per gallon \$3.00) (per bushel \$23.00) f. o. b. here.

**Bitter Almond**—(Per lb. 30c) postpaid; (10 lbs. or more, 20c per lb.) f. o. b. here. Sold out; new crop ready Sept. 1.

**Myrobalan Plum**—Considered the best root stock. (Per lb. \$1.00). Write for quantity price. One pound contains about 100 seeds.

**California Wild Walnut**—The best and hardest. One pound contains about 100 seeds. (Per lb. 25c prepaid). Write for quantity price. We have both northern and southern grown seed.

**Apricot**—(Per lb. 20c postpaid) (10 lbs. 50c f. o. b. here). Write for quantity price.

**Peach**—We have a limited quantity of pits from seedlings, and some Salways. (Per lb. 15c) postpaid; (10 lbs. 50c) f. o. b. here.

If inexperienced, write for our book on Art of Propagation, 30c, and Planter's Guide, 25c.



# PLANT DEPARTMENT

No tender plants sent by mail except at the buyer's risk. See page 11.

Ever since we have been in business we have endeavored to handle plants in connection with our Mail Order Department in seeds. Each year this practice has resulted in more or less dissatisfaction to the buyer, and much annoyance and financial loss to ourselves, from the following causes:

An order which includes both seeds and plants is always delayed one or more days because of inspection of the plants here, and again delayed at destination for another inspection. This delay is annoying to the customer and often results in great loss because when he orders seeds and plants he expects them at once and prepares the soil. Several days delay may mean another irrigation and often the loss of the plants entirely. This loss has fallen upon us, although

no fault of ours, but we have always stood the loss rather than have a dissatisfied customer. We aim always to mail seeds the same day the order is received, but this cannot be done with plants. While it is true plants are usually handled by seed houses and this can be done satisfactorily at the store, but a mail order plant business does not go hand in hand with the seed business. It is unsatisfactory to both the customer and the dealer.

We have during the season at our Branch Store at 115 N. Main Street a full assortment of Deciduous and Citrus Trees, also Berry Plants of all the popular varieties for home gardens, and roots of Rhubarb, Asparagus and Horseradish.

Prices obtained at the store.

## PERSIAN GRAPES

We are again offering some one-year-old rooted cuttings of the Persian Grapes introduced by us last season. We claim that these varieties are new to California and that they have exceptional merit in flavor and size, also that all

these varieties are thriving on soil so alkaline that apple trees will not grow and the blue alkali weed is abundant. Read the description of each.

Karum



Actual Size

Black Damson



Actual Size

Hamadan



Actual Size

**Karum** (From the Valley Karum, Persia. A long white grape or delicious flavor and so few having seeds that it is almost a seedless variety, forming enormously large clusters. It is a good keeper and should prove a good shipping variety.

**Black Damson** The exceptional merit of this variety is its good flavor, enormous productiveness, even bearing the first year from cuttings, and its hardness to resist cold, heat, winds, and on account of the hardy skin, it is likely to prove a better shipper than any of the known varieties.

**Hamadan** (From the Valley of Hamaden, Persia). For table use probably the best of the three. Compares with the Muscat, but much superior in every respect. It is almost seedless, and should prove a good shipper.

All three varieties are deliciously sweet, and when properly trellised are enormously prolific; ideal for the grower of table grapes, and every home garden should have one of each of these grapes.

One year old rooted vines, any variety, 50c postpaid.

One each of the three varieties, \$1.25 postpaid.

## GRAPES, LOCAL VARIETIES

One year old rooted cuttings. Muscat, Red Emperor, Black Morocco, Rose of Peru, Black Hamburg, Cornichon, Thompson Seedless, Tokay, Eastern Concord (Each 15c) (dozen \$1.50) postpaid; (100 \$6.00) f. o. b. here. Write for quantity price.

## PASSIFLORA ENDULIS

Passion Vine

The Passion Vine thrives in California. It is not yet well known, however, and hence its fruit has not come into general use. In Australia it is extensively grown.

The fruit is the size of an egg, and contains a pulp of exceedingly good flavor. It is consumed much in the manner as an egg—that is, by cutting off one end and removing the contents with a spoon. The pulp is also used as a flavoring for cakes, ice-creams, drinks and sweet-meats, and is a much appreciated addition to fruit salads. It packs and ships well.

The vine is a vigorous grower, and well suited to use on

trellis or screen frames. It is quite hardy.

Price, large plants in 4-inch pots, 75c each, postpaid. Seeds, per pkt. 10c.

## Mammoth Fruited Passion Vine

A New Fruit from Brazil

This new vine is described by the introducer as a very rapid grower, with flowers the same as *Passiflora Edulis*, but hold much longer. The fruit is edible and grows to weigh as much as eight pounds. The vine is quite hardy for Southern California, and is not attacked by caterpillars.

The above description is furnished by the introducer, whom we know to be dependable, and we therefore recommend it to you. Plants, 75c each, postpaid.



# Citrus Fruit Trees

(All prices f. o. b. here)

Read about this wonderful Orange now so popular in Florida. Introduced by us two years ago. If interested write for further information.

**Wilder Medal** The most noted horticultural organization in the country today, as it has been for the past sixty years, is the American Pomological Society. This Society, recognizing the merits of the Lue Gim Gong Orange, awarded a Wilder Silver Medal to this variety. We believe this is the first time a Wilder Medal has been awarded for a new variety of Orange since the society was organized, and gives a fair idea of the estimation in which this fruit is held by experts.

**Description.**—Size large; form oblong, carrying the size well out to the rounded ends; color deep orange-red; skin thin, smooth on current crop, becoming rougher on two and three year old fruit; sections well defined, ten or eleven in number; flesh deep orange; juice sacks large; juice abundant, even in old specimens; flavor a rich blending of sweet and subacid; quality best. A fine shipping fruit and a good keeper. Very hardy and resistant to cold.

An extract from a personal letter from Mr. W. S. Hart, Hawks Park, Fla., sets forth his opinion of the Lue Gim Gong Orange. Mr. Hart has for years stood for all that is best in citrus-fruit growing in Florida, and no man is more competent to pass on the merits of a new variety. He says:

"During the past two seasons, I have had some opportunity to study the peculiar merits of the Lue Gim Gong Orange, and I can honestly say that I have become convinced that it is the most promising money-producing proposition for the citrus-grower now in sight."

We offer two year old budded trees \$3.00 each f. o. b. here. Write for quantity price.

Washington Navel	\$1.25
Valencia	1.25
Tangerine	2.50
Kumquat	2.50
Eureka Lemon	1.25
Pomelo (Marsh Seedless)	1.50

Deciduous Trees, price on application.

**Guava** Strawberry (Per plant 25c) (3 for 50c) postpaid.  
**Feljoa Sellowiana** (12-in. plant 75c each postpaid) (Seed, pkt. 15c).

## Berries

(Write for Quantity Price.)

All berry plants listed herein are ready for delivery from January 1st until April 15th, except Strawberries which are ready for market from November 1st until April 1st.

When ordering berry plants along with seeds, do not expect to receive them together. We do not wish to ship plants the latter part of the week, because they may be delayed over Sunday; therefore, all plants are shipped early in the week.

F. o. b. means we deliver to the carrier; you pay express charges.

We aim to have only strong healthy plants, and true to name. We have received few complaints, all of which have been due to delay in transit.

Every home garden should have a few berry vines in the corners or along the fence. It requires only a few vines to supply the family table with berries. They are but little trouble and not particular as to soil.

**Blackberries** Mammoth, Himalaya, Crandall's. (3 for 25c) (per dozen 75c) prepaid.

**Raspberries** St. Regis, Cuthbert, Surprise, Black-cap. (3 for 25c) (Per dozen 75c) prepaid.

**Dewberries** Gardena, Mortgage Lifter. (3 for 25c) (Per dozen 85c) prepaid.

**Phenomenal Berry** (3 for 25c) (Per dozen 75c) prepaid.

**Logan Berries** (3 for 25c) (Per dozen 75c) prepaid.

## Strawberries

Northern Grown Plants

**ETTERSBURG NO. 80**—(Per doz. 50c) (25 plants 75c) (100 plants \$2.00) prepaid.

**BANNER AND NEW OREGON**—(25 plants 50c) (100 plants \$1.50) prepaid; (1000 plants \$12.00) f. o. b. here.

Local Grown Plants

**KLONDIKE AND BRANDYWINE**—(50 plants 75c) (100 plants \$1.00) prepaid; (1000 plants \$5.00) f. o. b. here.

**EASTERN GROWN PLANTS**—Prices on application.

## "EGGS"

ATTENTION! Farmers, Poultry Men, Egg Producers and Consumers  
 A Great Discovery, Momentous in Economic Possibilities

## THE FLEMING EGG PRESERVER

REGISTERED IN UNITED STATES AND CANADA

Makes 15 cent Eggs worth 50 cents—Costs 2 cents dozen.  
 Preserves Spring Eggs for Winter Use Fresh and Sweet as day they were laid, Without Cold Storage or Refrigeration

DISCOUNTS ALL OTHER PROCESSES TEN TO ONE. AN ABSOLUTELY  
 RELIABLE AND UNQUALIFIED SUCCESS

**THE FLEMING EGG PRESERVER** is marketed in four-ounce containers, similar form to chemical pastes or cold creams. One package will preserve 100 dozen eggs nine to twelve months, independently of cold storage of every nature whatsoever, in precisely the same condition as at the hour of application. Its specific mission, therefore, is to carry low-priced springtime eggs over the long period of cheap prices, either for home consumption or winter markets when stocks are scarce and prices high.

The process of applying Fleming Egg Preserver is simple and conveniently accomplished. Children could do the work. Women operators, not specially experienced, handle 400 to 500 dozens daily. Ordinary egg cases or common boxes are utilized for packing purposes which, with contents properly treated with Fleming Egg Preserver, are stored in pantry, cellar or outbuildings, where protected from moisture and freezing.

Eggs thus treated will, any time within twelve months, serve with equal satisfaction the purpose of strictly fresh yard eggs such as bring 40 cents to 60 cents per dozen in winter months. If kept where the egg cases are exposed to free circulation of pure air they cannot be distinguished from freshly-laid eggs, no matter how careful the tests.

Eggs treated with Fleming Egg Preserver will poach, boil, fry or heat up for icings, in every respect as the hour they were laid. Experts confess inability to distinguish between eggs six to nine months in storage under the Fleming process and eggs known to have been laid on day of test. Fleming Egg Preserver stocks are invariably found fresh and sweet as upon the day treated—free of objectionable odors, strong or musty flavors as in case of cold storage eggs.

The following testimonials tell the story more eloquently and with more of specific detail than we could otherwise attempt. When you have personally read them your enthusiasm will compel an immediate trial and its recommendation to your neighbors and friends. We will pay you \$100.00 should you ascertain either of them to be spurious. We will issue still other testimonial circulars from time to time with which we will be glad to supply you upon request.

Read the many testimonials from various State, Commercial and other institutions and individuals.

### UNIVERSITY OF IDAHO

College of Agriculture and  
 Experimental Station  
 Moscow, Idaho, Feb. 18, 1918.

Mr. E. G. Fleming,

Dear Sir: We placed in storage 37 dozen of eggs during the month of August, 1915, with the Fleming Egg Preserver and in February, 1916, we find these eggs to be in as good condition as the day they were stored. I believe that you have a wonderful product and I sincerely hope that you will be successful in placing it before the people in a manner that will be satisfactory to yourself and I hope that you will be successful this year in placing a great quantity of your goods and that you will be able to push it vigorously from now on because I am certain that there is no doubt of the quality and merits of the article you are selling. I am,

Very truly yours, FREN MOORE,  
 Department of Poultry Husbandry,  
 PRESERVING EGGS

(By Fren Moore, Poultry Husbandman)  
 (Extract from "Western Poultry," Lewiston, Idaho.)  
 The Fleming Egg Preserver is the best method for storing eggs in the farm that is to be found on the market. It is easy to apply, is effective, very economical, and there is no likelihood of its being adulterated. The department has used it and finds it to be perfectly reliable. The eggs that were stored in it in the summer of 1915 came out in March, 1916, in perfect condition. This year the department is storing over five hundred dozens in the Fleming Egg Preserver, for the great winter market. One jar or package, (4-oz.) is supposed to store one hundred dozens of eggs. It is found at the department that a jar stores a little over one hundred dozens and in no case has it fallen short.

We have no interest in the Fleming Egg Preserver in any way, either directly or indirectly, and we wish to place the information before the farmers and poultrymen of the state, which will be of the greatest benefit. The poultry industry is no different than any other in that it must be manipulated so that the most possible can be gotten out of it.

### IOWA STATE COLLEGE

AGRICULTURAL AND MECHANICAL ARTS  
 Agricultural Extension Department  
 Ames, Iowa, Jan. 11, 1916.

Mr. R. G. Fleming, P. O. Box 455,

Dear Sir: Your letter of January with enclosures received.

All of the eggs that we have opened have been very satisfactory and I am surprised with the efficiency of your egg preserver. I am glad to know that sooner or later you expect to put the product into Iowa. I will be glad, if you so desire, to recommend a man to you who will handle this product satisfactorily for the state.

Thanking you very much for a copy of the letters and hoping to hear more from you, I am,  
 Very truly yours, H. A. BITTENBENDER,  
 Extension Associate Professor of Poultry Husbandry,  
 Note—Been testing this since April, 1915.

Dear Friend Fleming: Yours of the 17th received, and in reply am glad to say my eggs are keeping fine. I have a few left that were preserved about the 23rd of September, 1915. They are just O. K. We had some friends here last Sunday. We boiled and poached some of the eggs for dinner, and they all said they couldn't get eggs like those in the city, so we told them the eggs were nine months old. They would not believe it. They held up well under candle. I keep them on my pantry shelf in a little egg carton. I have 86 cases stored. One case of pullet eggs was preserved the month of January, ten cases the latter part of February, 1916, and they look as good and fresh as the day they were laid. They'll keep in any old shack.

I've experimented with every egg preserver that I ever heard of and can truthfully say the Fleming Egg Preserver is the best and most efficient known. The poultry man who uses it can get the highest market price for his eggs in October and November and won't have to sneak around to the baker and macaroni factory like he would with waterglass and other stuff. I do not hesitate to recommend the Fleming Egg Preserver to all my friends.

Yours for success,  
 C. E. SCIFERS,  
 May Creek Poultry Farm

2 oz. tins sufficient to preserve 50 doz. eggs, 85c postpaid.

4 oz. tins sufficient to preserve 100 doz. eggs, \$1.35 postpaid.

Mr. E. D. Jones,

Dear Sir:—Answering your query of this date we would inform you that we processed fourteen hundred dozen fresh eggs with Fleming's Egg Preserver, last May, and kept them in storage until now. We have just put them on sale and find that they are as fresh and palatable as when put up.

As we find this process is satisfactory, and profitable, we shall arrange to put up a greater number next year.

Yours very truly,  
 VALLEY MEAT COMPANY.

Marysville, Cal., Nov. 30th, 1917.

The Fleming Egg Preserving Co.

Gentlemen:—Beg to report that the one dozen eggs that we treated with your preservative on January 15th, 1917, and put under seal, were opened this day, December 3rd, 1917, and found to be in perfect condition. Some of these eggs were poached and stood up just like a fresh egg and looked and tasted exactly like a fresh laid egg.

We are satisfied that this preservative will do all that you claim for it.

Yours very truly,

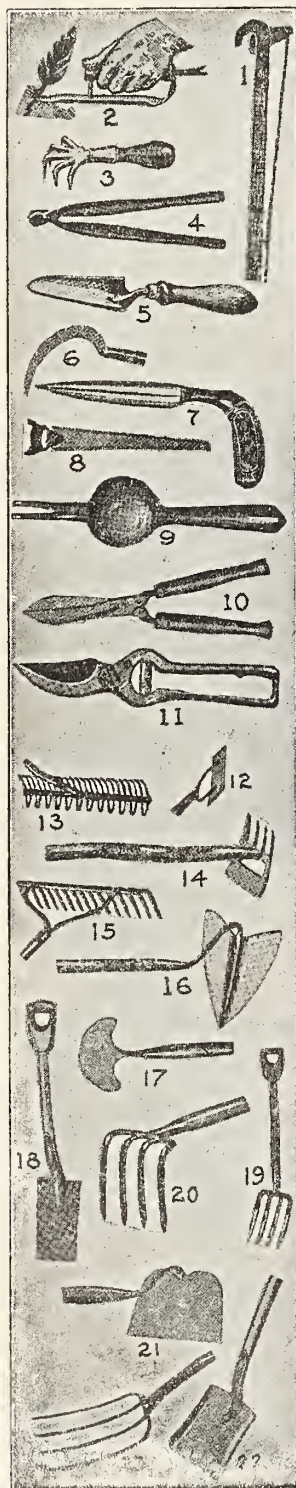
F. F. SMITH & CO.,  
 FFS-BED  
 Sacramento, Cal., Dec. 3rd, 1917.  
 Berkeley, California, December 6th, 1917.



# Nursery Requisites

On this page we can only hint at some of the lines we carry, trusting you will, if interested, write and inquire for more information. We carry a full line of Lawn Mowers, Garden Hoes, Pruning Knives, etc. Look to the index to find what you want.

## GARDEN TOOLS--See Pictures



- No. 1. Water's Tree Pruner, 4 to 10 ft., \$2.00 to \$2.50.  
 No. 2. Pond's Handy Garden Tool, 35c, by mail, 45c.  
 No. 3. Excelsior Weeder, 20c, by mail, 30c.  
 No. 4. Tree Pruner, all sorts, from \$1.25 to \$3.00.  
 No. 5. Garden Trowels, all sorts, from 15c to 60c.  
 No. 6. Grass Hooks, or Sickles, 50c, 60c, 75c.  
 No. 7. Dibble, 60c, by mail, 70c.  
 No. 8. Pruning Saws, double and single edge, \$1.50.  
 No. 9. Havil's Weeder, 50c, by mail, 60c.  
 No. 10. Hedge Pruners, \$1.50 to \$3.00 each.  
 No. 11. Pruning Shears, from 75c to \$3.50 each.  
 No. 12. Scuffle Hoe, 8-in., 85c, 12-in., \$1.25.  
 No. 13. Ohio Wire Rake, \$1.00.  
 No. 14. Hoe and Rake combined, \$1.00.  
 No. 15. All Steel Rake, \$1.25.  
 No. 16. Warren Hoe, \$1.25.  
 No. 17. Turf Edger, \$1.00.  
 No. 18. Steel Spade, \$1.35.  
 No. 19. Spading Forks, \$1.35.  
 No. 20. Potato Hooks, \$1.25 to \$1.75.  
 No. 21. Garden Hoes, from 4 to 10 in., 75c to \$1.25.  
 No. 22. Steel Shovels, \$1.50 to \$2.50 each.  
 No. 23. Manure Fork, \$1.35, May Fork, \$1.75.  
**Balling Spades.—\$2.25.**  
**Ladies' Garden Sets—Made of best material. (Per set \$2.00).**  
**Bishop's Folding, Adjustable Handle Weeder, \$1.25.**

## LAWN MOWERS

We carry a complete line of Lawn Mowers, and aim always to have the best. The following is a list of what we have, with prices attached:

**No. 1—Capitol Lawn Trimmer and Edger—**Does what Lawn Mowers leave undone. Having one side without wheel, it can be run close to walls and trees, cutting grass clean and quick. Can also be used for trimming edges of walks, etc.: 4 steel blades, 6 in. wide **Price, \$8.00 complete.**

F. & N. SIGNET PLAIN BEARING			
Open type, 8-in. drive wheels, four knives.		Wt.	Price
12-in.	.....	31 lbs.	\$3.90
14-in.	.....	33 lbs.	4.10
16-in.	.....	37 lbs.	4.35

**LAWN QUEEN BALL BEARING**  
 Full open type drive wheels, 9 in. diam., reel 5½ in. diam., four knives.

LAWN QUEEN BALL BEARING			
Full open type drive wheels, 9 in. diam., reel 5½ in. diam., four knives.		Wt.	Price
12-in.	.....	28 lbs.	\$6.25
14-in.	.....	30 lbs.	6.60
16-in.	.....	34 lbs.	7.00

**LAWN KING BALL BEARING**  
 Open type wheels, 10½ in. diam., reel 6 in. diam., four knives.

LAWN KING BALL BEARING			
Open type wheels, 10½ in. diam., reel 6 in. diam., four knives.		Wt.	Price
14-in.	.....	48 lbs.	\$8.50
16-in.	.....	53 lbs.	9.00
18-in.	.....	58 lbs.	9.50

## GARDEN HOSE

Owing to the general dissatisfaction of selling cheap and inferior hose, we have discarded all brands except those that have sold for a number of years and have proven satisfactory.

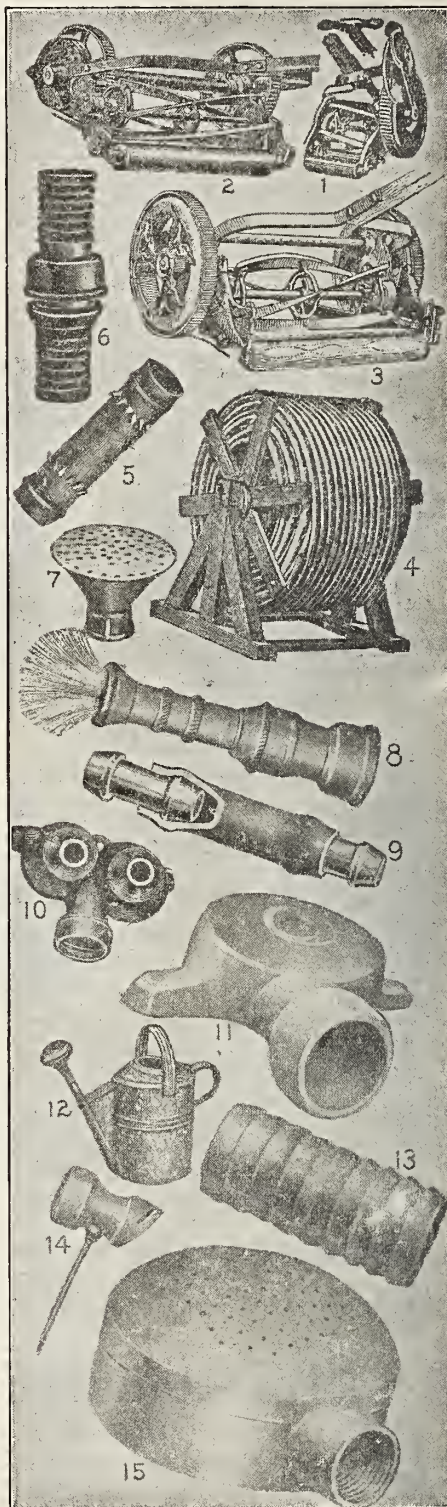
**No. 4—A. & M. Moulded Hose** is equal in quality to the highest priced grades of any other make. None is superior. (¾ in. 18c per ft.) (½ in. 16c per ft.).

**Hose Washers, per doz. 20c postpaid.**  
**No. 5—The Cooper Brass Hose Mender—20c each, prepaid.**

**No. 6—Brass Hose Couplings—½ in. or ¾ in. Per pair, 50c, prepaid.**

**No. 7—The Rose Nozzle, 85c, prepaid.**  
**No. 8—Boston Nozzle, 75c, prepaid.**

**20c per dozen, prepaid.**  
**No. 10—Twin Sprinkler, 50c, prepaid.**  
**No. 11—Willis Sprinkler—50c, prepaid.**



**No. 12—Sprinkling Can—(6 qts. 80c) (8 qts. \$1.00) (10 qts. \$1.25) (12 qts. \$1.50) f. o. b. here.**

**No. 13—Brass Hose Menders—10c, prepaid.**

**No. 14—Fan Sprinkler—40c, prepaid.**

**No. 15—The Fountain Sprinkler—\$1.25, prepaid.**

All kinds of Hose Clamps, 5c per pair.

Hose Nozzles, a large assortment.

We have sprinklers of every description. If you will describe what you want, we will send it to you



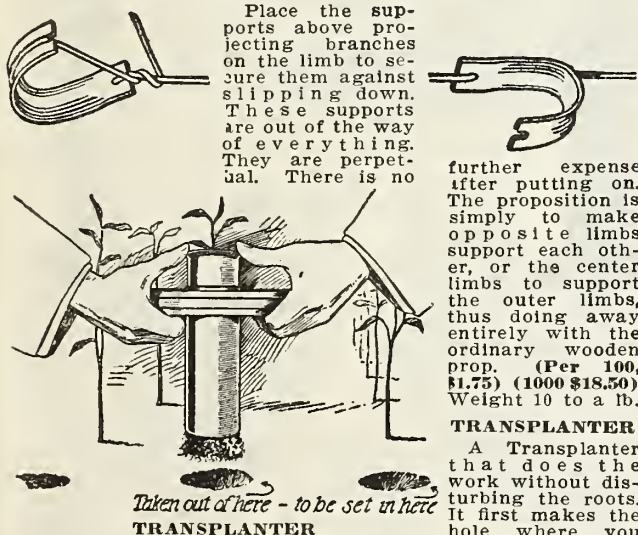
Grafting Wax—(¼ lb. 20c) (½ lb. 30c) (1 lb. 40c) postpaid.  
 Hanging Baskets (Clay)—(7 in. 20c each) (8 in. 25c) (10 in. 75c) (14 in. \$1.50) f. o. b. here.  
 Wire Hanging Baskets—(10 in. 35c) (12 in. 45c).  
 Wire Wall Pockets—(10 in. 45c) (12 in. 55c).  
 Green Moss—(1 lb. 10c) f. o. b. here; (bales, 80 lbs., 7c lb.).  
 Spagnum Moss—(Per bale \$2.50).  
 Budding Twine—(Per ball 35c). Postpaid 45c.  
 Budding Cloth—(Per square yard 50c, prepaid).  
 Raffia—(Per lb. 50c) (10 lbs. \$4.50) f. o. b. here.  
 Balling Twine—(5-lb. ball \$1.25).  
 Plant Stakes—Square, painted green:  
 2 feet.....35c per dozen    3 feet.....50c per dozen  
 4 feet.....75c per dozen

## POT LABELS

Plain	100	1000	Painted	100	1000
4.....	15c	\$ .90	4.....	12c	\$1.10
5.....	20c	1.15	5.....	25c	1.25
6.....	25c	1.40	6.....	30c	1.50
8.....	50c	2.50	8.....	60c	2.75

Tree Labels—Copper wired and painted:  
 3½ inch .....35c per 100    \$1.65 per 1000

## THOMPSON'S TREE SUPPORT



Then pick up the plant, root and all, without disturbing it, and sets the plant into its new location without checking its growth. A child can operate it. Just the thing for Eucalyptus growers and nurserymen. (50c) (by mail 60c).

## MORE ABOUT SORGHUMS

## DWARF MILO MAIZE

Read what Mr. E. S. Richards says: "I got eleven sacks of Dwarf Milo Maize of you in June and distributed it among my neighbors, and it turned out the best of any in the country. I only sowed twenty acres and some of that got no water, and I never cultivated it but got over 400 sacks. It is worth \$57.00 per ton."

**Kaffir Corn** Grows similar to the Milo Maize except the head is upright instead of hanging over like Milo Maize and Egyptian Corn. It will yield two to three thousand pounds of grain per acre. Sow 8 pounds of seed per acre drilled. Price—Per (lb. 25c prepaid). Write for quantity price.

**SHALLU, or Egyptian Wheat** Read the following letters:

Mr. de Venelle: "I planted 15 lbs. of your Shallu and harvested 1900 lbs. of grain and 5 tons of fodder, without irrigation."

Mr. E. S. Cook, Imperial Valley: "It grows as thrifty on alkali soil as any other; it produces from two to three tons of seed per acre."

Per lb. 25c postpaid.

## Legal Weights—Pounds per Bushel

Barley .....	48	Clover Seed ..	60	Potatoes .....	60
Beans .....	60	Millet .....	50	Rye .....	55
Corn .....	56	Oats .....	32	Wheat .....	60

**Berry Hook**—Just the tool to trim blackberry, raspberry, dewberry and loganberry vines. No scratched hands. You cannot do the work well without this tool. Price \$1.00.

## Pennsylvania Fruit Picker



Pennsylvania Fruit Picker

No ranch is completely equipped without this valuable tool. It is always the choicest fruit that cannot be reached from the ladder; you do not wish to knock it down with a club, as the fall would bruise it. Use the Fruit Picker and the fruit is caught in the pocket prepared for it. Every ranch that has half a dozen or more fruit or walnut trees should have one or more Pennsylvania Fruit Pickers. Price—50c. by mail 65c.

## RAFFIA

While we offer tape for this purpose, we recommend the use of raffia as being more sanitary, cheaper and better than tape. The large growers along the Sacramento River use raffia exclusively. One pound is equal to 700 yards of tape. Price—(1 lb. 50c) (10 lbs. \$4.50). Postage extra. For large quantities write for price.

## ASPARAGUS TAPE

Write for price and description.

Asparagus Knife.—Price 50c, by mail 65c.

Asparagus Moss.—We always have on hand a large supply of moss for asparagus shippers. Price on application

## CLAY FLOWER POTS

Flower Pots—(2 in. 20c doz.) (3 in. 35c doz.) (4 in. 50c doz.) (5 in. 60c doz.) (6 in. \$1.00 doz.) (7 in. \$1.25 doz.) (8 in. \$1.50 doz.) f. o. b. here

## SEWING TWINE

No 1—Per lb., 65c; Bdl. 12 lbs., \$7.00.

No. 2—Per lb. 55c; Bdl. 12 lbs., \$6.00.

Sack Needle—Plain, 5c each; Spring Eye, 25c.

## Hatch Your Chicks by Electricity

A new method of heating. Install in your incubator and brooder the Climax Electric Heater and the Reliable Electric control. No danger of fire. Price of outfit complete \$12.50. If interested, write for circular

## NOTICE! NOTICE! NOTICE!

We aim to list in this catalog our leaders in every line. Yet we have on hand many items of general use too numerous to mention. Therefore we request that should you desire anything pertaining to agriculture write us about it. If we do not have it, we will be accommodating and get it for you. Consider us your friend and make use of us.

## READ

Before you set aside this catalog, have you read pages 1 to 4? Also page 52? Did pages 5, 6 or 7 interest you? When you have a question, see pages 8, 9 and 10 for the answer. If you are a bean grower, see pages 18 to 22. Read pages 24, 27 and 39. If a lettuce grower, see page 37. If a melon grower, see pages 39 and 45. If an onion grower, pages 46-49. If a potato grower, see page 55. Read about Peas on page 51, and Peppers on pages 53 and 54. See Tomatoes, pages 61 to 63. Read about the Monstrous Lima Bean on page 18, and about the Home Tomato on page 62. See Home and Field Canning Machines on page 64. Soil Renovators; crops for green manuring, and to prevent erosion, see page 68. Look over pages 68 to 76.

Do not destroy this catalogue. You will need it before you get another. It is too valuable to be without.

See the  
**AMERICAN BEAUTY DUST SPRAYER**  
 Page 112



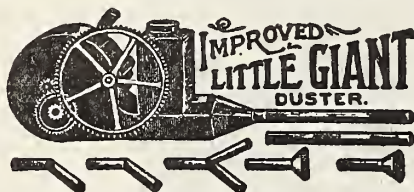
# Ranch and Orchard Requisites



**Sulphur Duster**  
½ gal. 60c; by  
mail 70c

## LITTLE GIANT DUSTER

The best dry powder gun; will distribute any dry insecticides and fungicides. Will do as much work in a day as a horsepower sprayer. Dusts two rows at once. Weight, packed, 15 lbs. Price—\$10.00.



## The Italian Sulphur Duster

Very similar to the Vermorel, slightly smaller and will serve the purpose quite as well. When in the market for a sulphur duster, give this one your consideration. We believe you will find it to your entire satisfaction. Weight, packed, 12 lbs. Price—\$15.00.

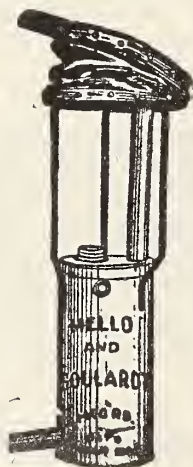


Italian Sulphur Duster

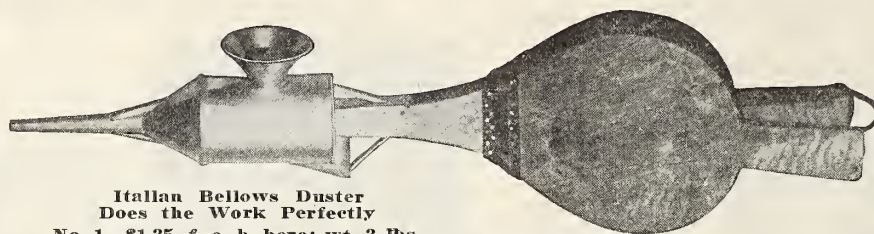


Out-O-Sight Mole Trap

**EUREKA SQUIRREL EXTERMINATOR**—With the use of Carbon Bi-Sulphide this is the best and cheapest implement with which to eradicate the squirrel pests on your land. We can confidently recommend the use of this machine in vineyards, orchards, grain fields, pasture lands, etc. It is of simple construction, best galvanized sheet steel with a bellows attached. The working of the bellows causes the Bi-Sulphide in the machine to generate a gas which is forced through the hole or holes, not forcing in any liquid, but simply a gas from Bi-Sulphide, thus saving 75 per cent of the Carbon Bi-Sulphide bill over the old way of saturating balls of old rags or cotton. A colony of squirrels can soon destroy \$50 worth of vegetation. Six dollars and IN worth of vegetation. Eight dollars expended for this Exterminator will destroy all the squirrels about your place. Price—\$8.00. Weight, crated, 12 lbs.



Eureka Squirrel  
Exterminator



Italian Bellows Duster  
Does the Work Perfectly

No. 1—\$1.35, f. o. b. here; wt. 3 lbs.  
No. 2—\$2.00, f. o. b. here; wt. 4 lbs.  
No. 3—\$2.50, f. o. b. here; wt. 5 lbs.



**Powder Blower**  
Price 25c; mail 30c.  
For house plants  
use this blower.

## THE EXPAN PROTECTORS

Made of oiled paper, perforated, are waterproof, tough, durable, and easily fastened; do not split or crack; will protect your trees from sunburn, rabbits, squirrels, and tree bores; can be taken off and put on again without injury. Be sure to state the size and kind you want, and then we can fill your order correctly.



Yucca

## YUCCA TREE PROTECTORS

Just the thing with which to protect the young trees and shrubs from the rays of the hot summer sun, from rabbits and other injury, being cheap and serviceable.



Expan

Prices on Expan Protectors			Expan		
Oiled Paper Per 1000			Black Per 1000		
12 in., 43 lbs.....	\$ 8.50		12 in., 65 lbs.....	\$ 7.00	
14 in., 50 lbs.....	9.75		14 in., 77 lbs.....	8.25	
18 in., 65 lbs.....	10.50		18 in., 100 lbs.....	9.00	
24 in., 85 lbs.....	12.50		24 in., 135 lbs.....	11.00	
30 in., .....	15.75		30 in., .....	13.75	

All Prices f. o. b. Los Angeles  
Prices of Yucca Tree Protectors

Per 100			Per 1000		
Size	Wt.	Price	Wt.	Price	
30 in. ....	25 lbs.	\$2.50	250 lbs.	\$21.00	
24 in. ....	18 lbs.	2.25	180 lbs.	18.00	
18 in. ....	12 lbs.	2.00	120 lbs.	15.00	
16 in. ....	11 lbs.	1.75	110 lbs.	13.50	
14 in. ....	9 lbs.	1.60	90 lbs.	12.00	
12 in. ....	8 lbs.	1.50	80 lbs.	11.00	
10 in. ....	7 lbs.	1.25	70 lbs.	10.00	

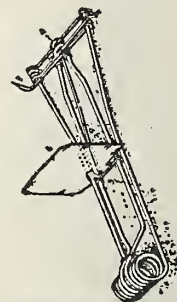
All Prices f. o. b. Los Angeles

## Out-O-Sight Mole Trap

**Mole Trap**—It is the best that has been patented. If properly placed over the runway it is sure to catch the mole, no matter which direction he travels. Louie Dick, a Chinaman, reported five moles the first week he had it. He says it has never failed to catch. 90c, by mail \$1.15.

**A. & M. Superior Gopher Trap**—This is the most convenient gopher trap yet put on the market. It is easy to set, and being small, it can be extended far down into the hole. 25c postpaid.

**Sure Pop Box Trap**—You never fail to get your gopher when two traps are set in the opposite directions in the main run. 20c, by mail 30c.



A. & M. Superior

**Easy Set Mole Trap** catches them going and coming. A child can set it with perfect safety. 75c; prepaid \$1.00.

**Steel Jaw Traps**, all sizes, 20c to \$1.00. When ordering state what game you wish to catch.

**MACABEE Gopher Trap**, 30c postpaid.



Easy-Set  
Mole Trap

## CONSULT THE INDEX

You may want information that you cannot readily find.  
Consult the Index.  
Keep this book, you will need it until you get another.



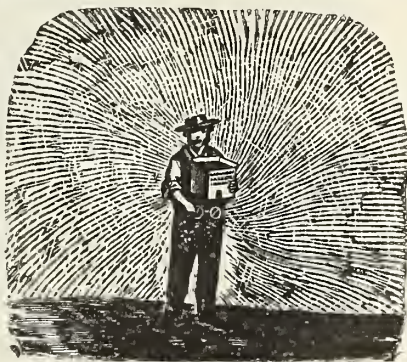
# Farm Requisites and Garden Tools

When wanted by Mail, add postage. See inside front cover page.

We have enumerated only a few of the specialties we carry. We have always on hand a full line of garden tools of every description, and for every conceivable purpose. Ask for anything you may want in this line. We have it.

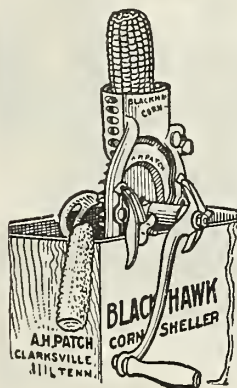
## Cahoon Seed Sower

The Standard Sower, acknowledged to be superior to all other hand sowers. Gives perfect satisfaction and can be used for sowing alfalfa and grains broadcast. Sows from four to eight acres per hour at a common walking gait. A saving of four-fifths of the labor and one-third of the seed by its use. A person entirely unaccustomed to sowing by hand can use this machine with perfect success. Price—\$4.00, f. o. b. here. Weight crated, 8 lbs. Can be sent by mail.



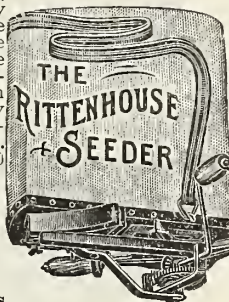
Cahoon Seeder  
Weight crated 8 lbs.

## Black Hawk Corn Sheller



Corn Sheller

Shells easily, and rapidly separates the cob from the corn. We give it special recommendation to poultry men. Price—\$3.25 f. o. b. here. Weight 20 lbs. packed.



## Rittenhouse Seeder

It has its right side concave in shape and rests nicely against the body just above the hip. The crank shaft being above the distributing wheel brings both hands to nearly a level and gives the operator the easiest position possible.

It sows evenly all kinds of grass seeds, grains and fertilizers. Clover is thrown a width of 18 ft.; timothy, 15 ft.; alfalfa, 20 ft.; wheat, 25 ft.; oats, 18 ft.; millet, 18 ft. An operator can sow from 40 to 50 acres per day. Price—\$1.50 f. o. b. here. Weight 9 lbs.

## BLACK HAWK FEED MILL

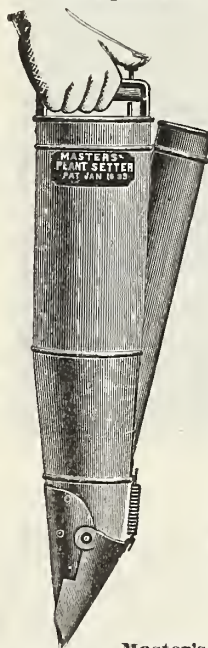
Grinds all kinds of grain fine or coarse. Price \$3.75 f. o. b. here.

In these times when intensive farming is so necessary to avoid the actual famine that will surely follow if we cannot wisely avert it, we must employ every agency possible to make up for the shortage of labor and to promote the greatest production from individual effort on the least area of ground. Therefore, select wisely the machinery and tools suitable to the task you have at hand. The man with as little as twenty acres will find it profitable to own a tractor and that it is more economical than to do all the work with a horse. But, the horse is as necessary as the plow and harrow on any plot above one acre. It is the one to five-acre gardener who must select wisely the one-man tools that will give him the highest efficiency, and each person must select for themselves the tools for their particular specialization; but there are certain tools which every gardener must have, and we here call attention to certain makes which we recommend as assential to efficiency:

Spading Fork, Long Handle. Pointed Shovel, Long Handle  
Best Steel Rake. Best Steel 7-in. Hoe.  
Five-tine Norcross Cultivator. Best Steel Trowel.  
Sprinkling Can. Garden Hose and Nozzle.

These tools are necessary to the beginner, no matter how small the garden. Other tools and appliances will be required as the garden grows larger and more diversified. Look these pages over; you are sure to find anything you will need, except large farming implements which we do not offer, but will get for you if requested to do so.

## Segment Corn and Bean Planter



Master's  
Plant Setter

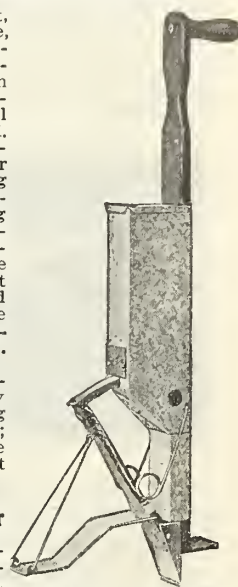
The lightest, most accurate, strongest, cheapest and most up-to-date Planter on the market. Never cracks a kernel nor skips a hill. It is always in position, never makes wrong move. Many gardeners are using this for their re-planting, and melon growers are using it to plant watermelons and cantaloupes. (See picture). Price—\$1.75 f. o. b. here. Weight 5 lbs.

Ask for anything you may want pertaining to garden tools; we probably have it, although not listed.

## Master Plant Setter

The only hand mechanical plant setter on the market. No stooping when using it, therefore no lame backs. All kinds of plants—Cabbage, Tobacco, Toma-

atoes, Cauliflower, Strawberries, Sweet Potatoes, etc., are set in water and covered at one operation. Weight 10 lbs. Price—Each \$5.50 f. o. b. here. Ask for circular.



Segment Corn Planter. All large melon growers are now using the Segment Corn Planter.

## "Norcross" Cultivators--Hoes & Weeders

The Modern Tools—for Garden and Flofers



Like the Human Hand, these tools cultivate closer to plants without injuring them, than any other implement known; leaving the soil level, loose and untrampled.

Cost but a trifle more than the common Hoe—accomplish much more and better work with decidedly less labor. The sharp tapering shovels enter the soil freely, literally tearing up every inch of it, from 1 to 6 inches deep as required.

Detachable Steel Prongs—Malleable Head—Extra High Grale Handles and beautifully finished throughout.

Three sizes, suited to both men and women.

## A DISTINCTIVE FEATURE



The "Norcross" 5-prong is the only Cultivator having a Detachable Ferrule (Pat'd) whereby same with handle may be detached and head attached to standard wheel plows if desired, using Norcross Universal Connection supplied extra, at 10c.

## PRICES EACH

5-prong (Wt. 3 lbs.), \$1.25, 3-prong (wt. 2 lbs.) 90c. Midget (wt. 12 oz.) 50c. Postage extra. See postal rates on inside front cover page.



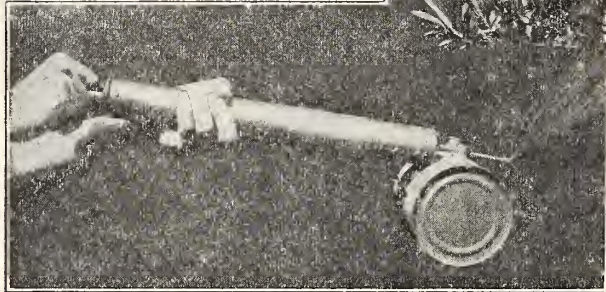
We have approximately four thousand acres growing in seeds for us in California under our supervision, yet the acreage for growing our seeds is scattered to every quarter of the earth, as experience has taught us where the best seeds grow. We find that the seeds which produce the best results are certain strains of various kinds which have originated and become acclimated right here in Southern California, discovered and introduced by us.



## SPRAYERS FOR EVERY PURPOSE

### Continuous Sprayer

This atomizer is what the name implies, by means of a small air chamber attached there is sufficient pressure to keep the spray continuous while the operator is making the back stroke of the arm, during which time other atomizers are at rest. **Tin 75c, prepaid \$1.00. Brass, \$1.25, prepaid \$1.50.**



### Continuous Sprayer

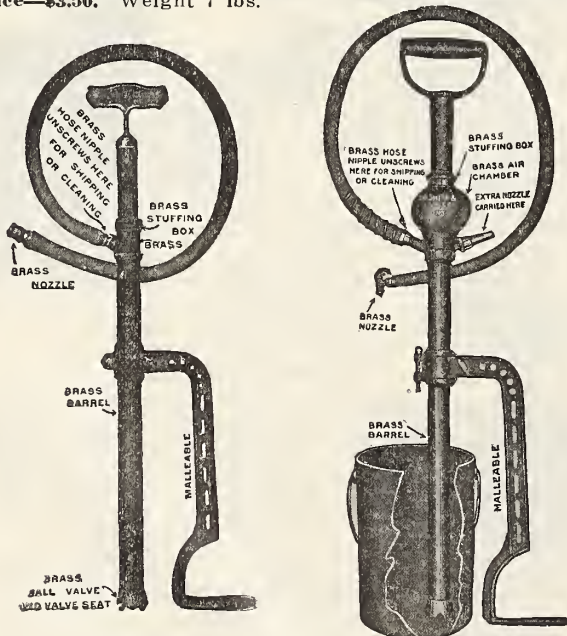
Two nozzles go with this sprayer, one for upward spray and one for straight ahead.

### Diamond Bucket Spray Pump No. 32

**Diamond Spray Pump**—A pump that will spray whitewash or any other mixture. Made of solid brass, no leather valves to wear out or be eaten up by the whitewash. Throws a continuous spray and is so simple that a child can take it apart. The Pump shown on this page is almost entirely of the best grade of brass, hence it cannot be affected by the action of the whitewash or of any ordinary spraying solution. It is fitted with a Bordeaux Nozzle. Altogether it is the most durable and serviceable bucket pump made. **Price—\$5.75 each. Weight 10 lbs.**

### Diamond Bucket Spray Pump No. 29

This pump is provided with large double air chamber, enabling the operator to keep a constant pressure on the nozzle of from 50 to 100 pounds with very little exertion. Rapid pumping is not necessary. Used largely for spraying trees, shrubbery, vegetables, as well as for whitewashing, spraying disinfectants, washing wagons, windows, etc. **Price—\$3.50. Weight 7 lbs.**



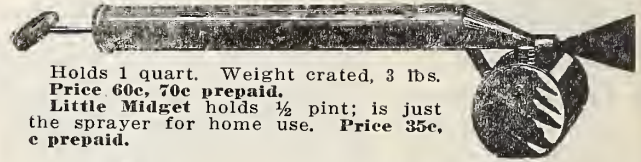
No. 29

No. 32

When wanted by Mail, add postage. See inside front cover page.

We have enumerated only a few of the specialties we carry. We have always on hand a full line of garden tools of every description, and for every conceivable purpose. Ask for anything you may want in this line. We have it.

### The Faultless Sprayer



Holds 1 quart. Weight crated, 3 lbs.  
**Price 60c, 70c prepaid.**

Little Midget holds ½ pint; is just the sprayer for home use. **Price 35c, prepaid.**

### Lowell Sprayer



Nozzle  
Bordeaux

best sprayer yet offered. **Price without curved rod extension, \$7.25. Brass Tank, \$9.00. Price of curved extension, \$1.00. Weight, crated, 20 lbs.**

### Bordeaux Nozzle

For Bordeaux Mixture and Whitewash. It cleans itself by reversing the aperture. **Price—90c, postpaid \$1.00.**

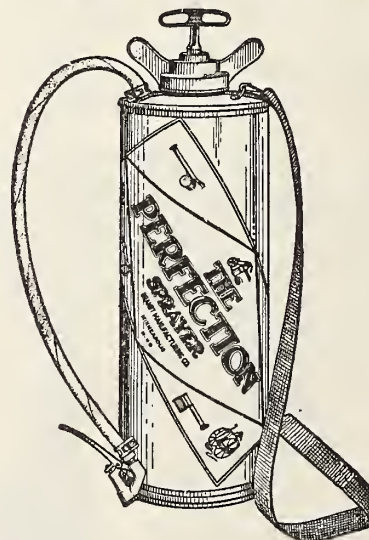
### Bordeaux Mixture

Too much credit cannot be given to the merits of Bordeaux Mixture. Use it all the time and on all occasions, where blight results from fungus or microscopic insects. It is a good tonic for all sick plants. **Price—(Per 1-lb. can 75c) (prepaid within 150 miles \$1.00).**



Lowell Sprayer

### Perfection Compressed Air Sprayer



The tanks are made of heavier metal than has ever been used in sprayers of this kind, making the tank practically unbreakable. The pump is 1¼-inch seamless brass tubing with a brass valve, and is sealed into the top of the tank with heavy threads following the construction used in the best makes of fire extinguishers.

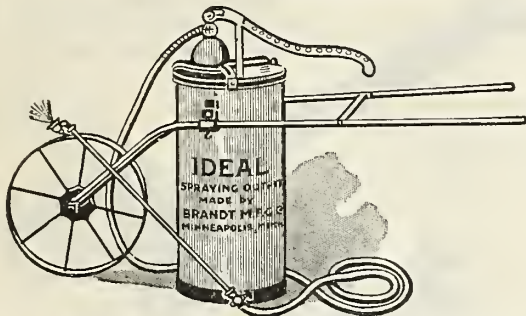
This Sprayer will handle Whitewash, Water Paints, Bordeaux Mixtures, etc., perfectly.

For whitewash and all heavy mixtures it is necessary to use a "W. W. Cap in nozzle, which is furnished with sprayers.

These sprayers are made in galvanized steel or brass as ordered. Weight, 9 pounds empty. All sprayers tested to 60 pounds before leaving factory. Weight packed, 14 lbs.  
**Galvanized Steel... \$1.00**  
**All Brass... 9.00**

We keep on hand all minor parts. **Perfection Nozzle, \$1.50; Disks, 10c; Disk Valve, 25c; Ball, 25c; Top Gasket, 10c; Metal Disk in Pump, 5c.**



**"Ideal" Spraying Outfit**

This outfit has been designed to fill the requirements of the small gardener and fruit grower. It is light, compact and easy to operate. The tank holds fifteen gallons, is mounted so that the liquid will not slop or spill, and in a way that makes it easy to handle. The pump spreads across the top of the tank and is held firmly in place by a thumb out. It has the largest air chamber of any spray pump of corresponding size. This enables the operator to keep a uniform pressure at the nozzle. The pump barrel is 1 3/4 inches in diameter, 7 inches in length. The valves are bronze balls 5/8 inch in diameter, which allows free passage for the liquids and prevents clogging. Both valves are removable. A pressure of one hundred and fifty pounds can easily be maintained. A mechanical agitator keeps the liquid well stirred.

Price—No. 30 complete, \$30.00. Wt. 75 lbs.

Price—No. 31 complete with compressed air tank, \$26.00. Wt. 80 lbs.

Ten Feet 3/4-inch Pressure Hose.

One "IDEAL" Nozzle.

Ten Feet Pipe Extension, in Three Pieces.

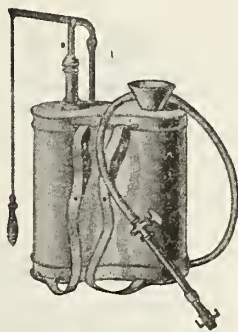
One Brass Shut-off Cock.



No. 31 with Compressed Air Tank

**KNAPSACK SPRAYER**

Just the thing for spraying celery, hen houses, small orchards. It leaves the hands free to operate. Made of brass or galvanized iron. Write for further description and price.

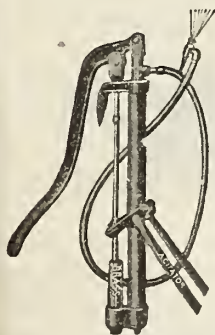


Knapsack Sprayer

**The No. 25 "Yankee" Barrel Spray Pump**

Made With Brass Nozzles, Brass Cylinder, Brass Ball Valves and Valve Seats

Quickly Attached to Any Barrel



No. 25

Spray Pump Complete

The No. 25 "Yankee" double acting barrel spray pump for use with a barrel spraying outfit. All parts are submerged in the liquid, and therefore no priming is necessary.

The suction barrel is made of heavy brass, and all valves and valve seats are made of the best brass, ground together so that all parts are absolutely air-tight. These parts will not corrode or rust out, nor is any part of the pump affected by the strong mixtures.

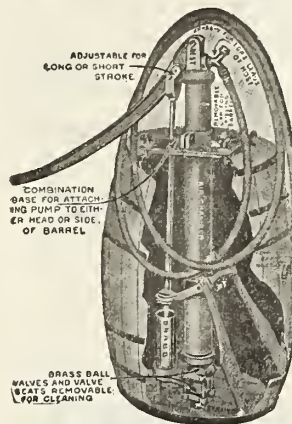
The duplex agitator keeps the liquid stirred up and prevents the ingredients from settling to the bottom. The pump is regularly fitted with 5 feet of 1/2-inch 3-ply rubber hose of A-1 quality, and Vermorel brass Nozzle, from which any size spray or stream can be thrown. It is impossible to clog this nozzle, and cannot get out of order.

Only very slow and easy pumping is necessary. The "Yankee" is used extensively for all spraying purposes, especially for orchards, vineyards, shrubbery, and for whitewashing hen houses, stables, fences, etc.

Price, complete, without barrel, \$11.00. Wt. 2 lbs.

**The No. 40 "Best" Barrel Spray Pump**

Made With Brass Nozzles, Brass Cylinder, Brass Ball Valves and Valve Seats



No. 40—"Best" Spray Pump, Complete With Agitator, 15 ft. Hose and Vermorel Nozzle

stroke of the lever handle may be changed by simply removing and replacing a single bolt, thus varying the pump's capacity.

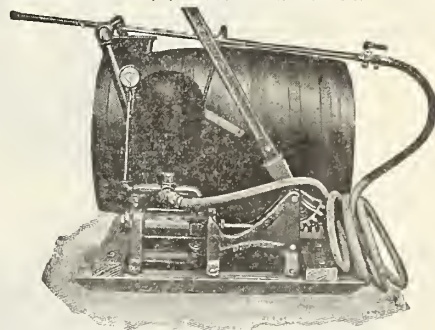
Price, complete, without barrel, \$17.00. Wt. 60 lbs.

"No. 7 King" Style A—2 by 7 inch heavy brass tubing. The pressure gauge is graduated to 300 lbs. The air chamber is extra large and made of pressed steel and is tested to 300 lbs. The handle is extra long and is made of malleable iron.

Equipped with:  
15 ft. 1/2-in. 6-ply Pressure hose;  
8 ft. Pipe Extension in two pieces;

1 300-lb. Pressure Gauge;  
1 Brass Shut-off Cock;  
1 "Fog" Nozzle.

Style A, consists of Pump, Skids and full equipment as shown but no barrel. Shipping weight, about 135 lbs.



Style "A." Price \$25.00

**Wagon Spray Boom**

Price \$10.00. Weight 28 lbs.



Wagon Spray Boom  
Wagon Spray Boom

narrow gates and can be set to spray between rows of grape vines, etc., two nozzles spraying to the right and two to the left. One barrel of liquid will cover three acres. A ten year old boy can operate it. The cheapest and best method of spraying a field of potatoes, celery, etc.

INSECTICIDES See Pages 9 and 65.

The ever increasing inroads of insects and disease has rendered it necessary to get adequate sprayers to meet this necessity. Call and see our assortment; it is complete.

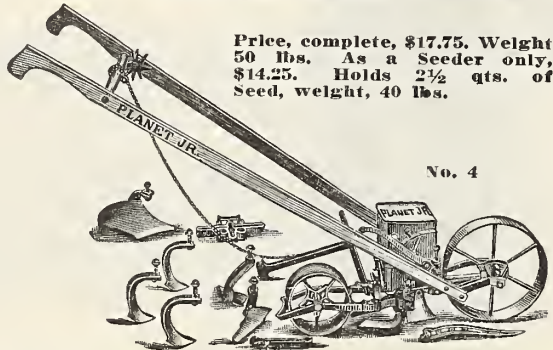


## PLANET JR. GARDEN TOOLS

Hand Cultivators and Seeders have become a garden necessity. One man with a hand cultivator can do the work of six men with the hoe, and do it easier. All are good, but some are more adaptable for all purposes.

Space will not permit a detailed description of all the garden tools we offer, but a short reference to each will suffice to let you know what we have, and if interested, please write for special circular or detailed description of what you want.

**No. 4, Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow**



Price, complete, \$17.75. Weight 50 lbs. As a Seeder only, \$14.25. Holds  $2\frac{1}{2}$  qts. of seed, weight, 40 lbs.

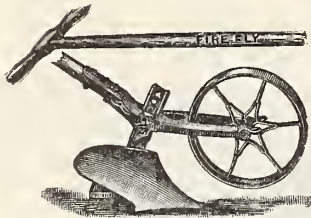
No. 4

This tool combines in a single convenient implement, a capital hill-dropping seeder, a continuous row seeder, an admirable single wheel hoe, an excellent furrower, a capital wheel cultivator and a rapid and efficient wheel garden plow. As a Seeder the No. 4 is accurate, simple, durable, reliable and easy running, doing first-class work in every particular. **Price, complete, \$17.75.**



No. 25—Price \$20.75. Weight, packed, 61 lbs. Holds  $2\frac{1}{2}$  qts. of seed.

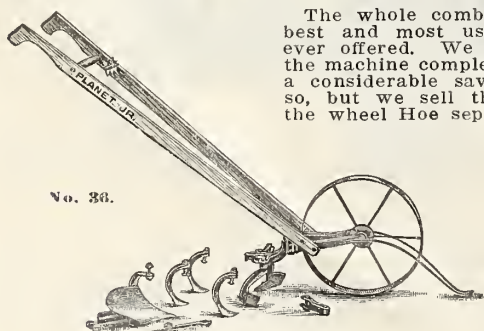
No. 25



Planet Jr. No. 25—Combined Hill and Drill Seeder and Double Wheel Hoe and Cultivator and Plow. **Price, \$20.75.** Weight, packed, 61 lbs.

**Planet Jr. Fire Fly.—1 plow only. Price, \$4.25. Weight, packed, 30 lbs.**

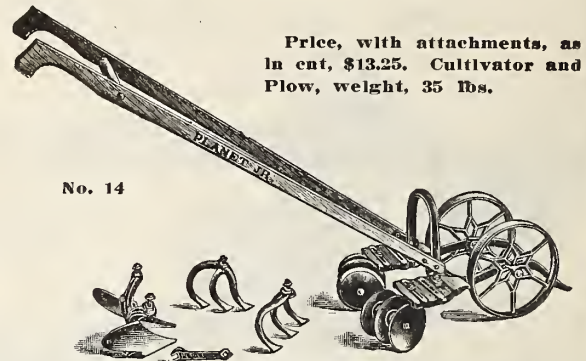
**No. 36 Planet Jr. Single Wheel Hoe, Cultivator and Plow. Weight, packed, 33 lbs. Price, complete, \$10.50.**



No. 36.

The whole combination is the best and most useful we have ever offered. We advise buying the machine complete, as there is a considerable saving by doing so, but we sell the seeder and the wheel Hoe separately, if desired. The extra attachments will also fit the No. 6 machine complete with the No. 36 Wheel Hoe.

No. 36



No. 14

Price, with attachments, as in cat, \$13.25. Cultivator and Plow, weight, 35 lbs.

No. 14 Planet Jr. Double Wheel Disc Hoe

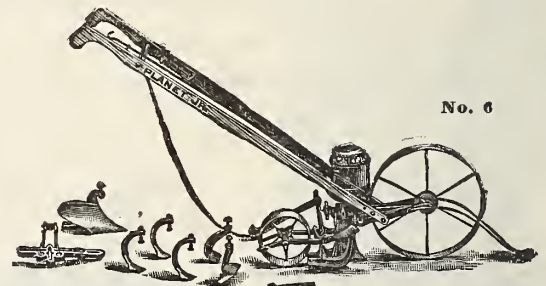
This new tool will give excellent satisfaction; is especially pleasing to all who work peat lands. There are three oil tempered discs on each side.

The set of prong cultivator teeth are constructed on entirely new lines, and will be found invaluable in general cultivation.

The plows are the regular Planet Jr. model and are continually valuable for furrowing, covering and plowing.

**Price, complete, \$13.25.**

**No. 6 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow. Price, complete, \$23.75. Weight, packed, 63 lbs. As a Seeder only, \$20.00; as a Wheel Hoe only, \$10.50.**



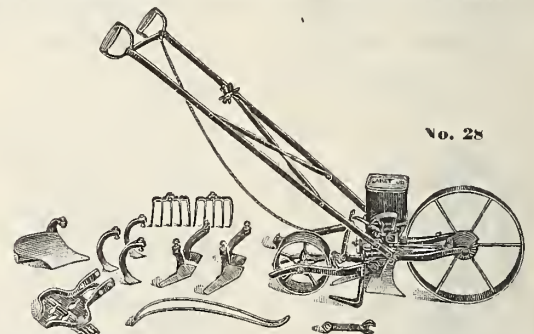
No. 6

This is our latest Combined Hill and Drill Seeder and Wheel Hoe, and after three years' gratifying use in the field, every detail has been perfected.

**What It Will Do.**—It drops all garden seeds in hills and sows in drills, with the greatest regularity, in a narrow line, to any exact depth required, covers, rolls down and marks the next row, all at one passage. As a wheel hoe, it hoes, cultivates and plows all garden crops, completing a row at every passage, up to 16 inches in width.

**No. 28 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, Rake and Plow.**

This is the best and most complete Hill and Drill Seeder. It is the culmination of forty years' experience. It corrects every defect. **Wt. packed, 64 lbs. Price \$23.00.**



No. 28

**No. 29 Planet Jr. Hill and Drill Seeder only. Same as No. 28. Wt. 54 lbs. Price \$19.75.**

**No. 16 Planet Jr. Single Wheel Hoe, Cultivator, Rake and Plow. Packed wt. 23 lbs. Price \$9.75.**

**No. 17 Planet Jr. Single Wheel Hoe, Cultivator and Plow. Packed wt. 21 lbs. Price \$8.25.**

**No. 17½ Planet Jr. Single Wheel Hoe and Cultivator. Packed weight, 19 lbs. Price \$7.35.**

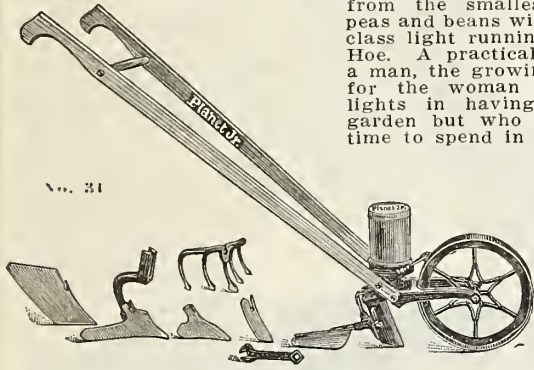
**No. 39 Planet Jr. Single Wheel Hoe, Cultivator and Plow. Packed weight, 23 lbs. Price \$9.75.**

**No. 12 Planet Jr. Double and Single Wheel Hoe Combined. —1 pair 6-in. Hoes, four steel Cultivator Teeth, 1 pair Plows and two leaf lifters. Packed weight, 31 lbs. Price, \$11.75.**



## Planet Junior No. 31

The No. 31 is a New Planet Jr. Combined Seeder and Wheel Hoe designed for small gardeners. It combines a thoroughly reliable Seeder that will sow all garden seeds from the smallest up to peas and beans with a first-class light running Wheel-Hoe. A practical tool for a man, the growing boy or for the woman who delights in having a good garden but who has little time to spend in it.



Price, complete, (No. 31) .....\$12.25  
As a Seeder only (No. 32) .....\$10.00  
As a Wheel Hoe only (No. 33) ..... 6.35

## No. 20

## Planet J. Fertilizer, Pea and Bean Seeder

Price Complete, \$30.50. Packed weight, complete, 83 lbs.

## IRON AGE IMPLEMENTS

The Iron Age Cultivators are very popular because of the large wheel which has made it easier to work. It is well made and gives perfect satisfaction wherever used.

No. 1—The change from a Seed Drill to a Double or Single Wheel Hoe is quickly made. The photograph shows the Double Wheel Hoe with side shoes attached.

"Iron Age" Double and Single Wheel Hoe. Price \$8.50.  
Weight, packed, 40 lbs.

No. 6.—Combined in this tool are three distinct and thoroughly practical implements, a Hill and Drill Seeder, a Double Wheel Hoe and a Single Wheel Hoe. As a Hill and Drill Seeder, packed weight, 57 pounds. Price \$17.50. As a Seeder only, \$11.00.



No. 6

No. 19.—To meet a demand coming from some sections for a Weed Plow and Cultivator equipped with a higher wheel than anything we have previously offered, we designed our No. 19 "Iron Age" Wheel Plow and Cultivator. In doing so

it will be noticed we have kept in mind those excellent features which have made our whole line of "Iron Age" Garden Implements so popular, that is, lightness combined with strength.



No. 19

No. 19. "Iron Age" Wheel Plow and Cultivator. Packed Weight, 22 pounds. Price \$4.50.

## THE COLUMBIA MACHINES

Write for Circular

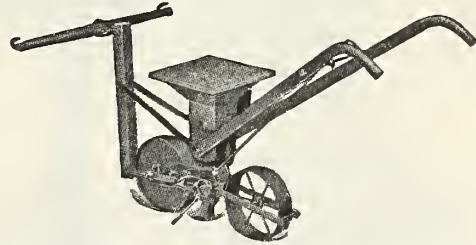
### The Greatest Seeding Machines in the World

They sow any kind of seed, large or small. They are all A POSITIVE FORCED FEED. Every seed is carried to the ground and covered; not a seed can escape, and not a seed can pass through the machine nor escape to the ground until the machine is in gear and moves forward and is ready to do its work; nor can a seed be shaken out or get to the ground when the machine is out of gear. A very important advantage possessed by no other planter. They are the simplest of all planting machines; the most certain and most complete planters in the world. WONDERFUL LITTLE MACHINES; plant all kinds of seeds, from the smallest to the largest.

### The Columbia Hand Planter No. 10

You can plant from one inch apart to ninety-six inches apart by the simple manipulation of the disk wheel and the cylinders. With this drill you can sow any seed in any quantity any distance apart up to eight feet. It will sow your pepper, tomato, and any other crops in the field that now must be done by transplanting. It is a universal planter because there is nothing in the seed line from the size of lima beans to turnip seed that it will not plant. With special apparatus it will plant shelled peanuts without crushing the seed. For hand planter, Price \$18.50. Weight 85 pounds.

Columbia Hand Planter No. 11—Same as No. 10 with the addition of the Fertilizer Attachment. Price \$22.00.

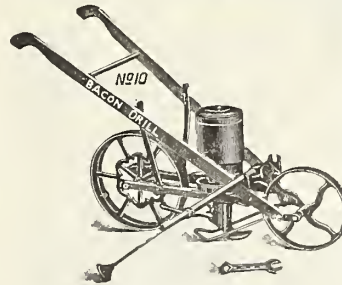


### COLUMBIA PLANTER WITH HORSE ATTACHMENT

Just the seeder for large gardeners. It does the work as perfectly and as economically as the hand planter. It is heavier than the hand planter, and fitted with a single-tree attachment and extra large adjustable hopper. Weight packed for shipment 100 pounds. Price, complete, \$28.50 f. o. b. here.

We aim to have on hand cylinders for every kind of seed. When ordering special cylinders, consult your circular, that you may get the one you need.

### The Bacon Hand Drill



Bacon Hand Drill

We have been handling the Bacon Drills since 1899, and the many customers who are using them are unanimous in praise of their durability and accuracy. All who have used this drill claim it is the most durable of all, absolutely reliable to sow evenly from one end of the row to the other. Has angle steel frame with Hill Dropper, Agitator and Front Wheel Extensions of Malleable iron, giving strength with lightness.

The Hill Dropper will deposit seeds in hills, 9, 12, 18 or 36 inches apart.

The feed, while simple, handles a very large variety of seed, getting an even distribution that is unequalled, and very noticeable in sowing Salsify, Parsnip, Prickly Spinach, Peas, Beet, etc., getting an even row with light seeding.

The feed will also handle Phosphates, which can be sown before or after seeding.

The Drills have a Shoe Opener, which deposits seed in a narrow line, allowing close cultivation, saving hand labor.

No. 10—Hill and Drill Seeders, \$8.00.

### GARDEN TOOLS FOR EVERY PURPOSE

Our line of tools is very complete. It is hardly possible you could wish for anything we do not have. We have added some low prilled drills and cultivators, not because they are inferior, but they are built for the small gardener who has little use for a drill, but cannot get along without one.

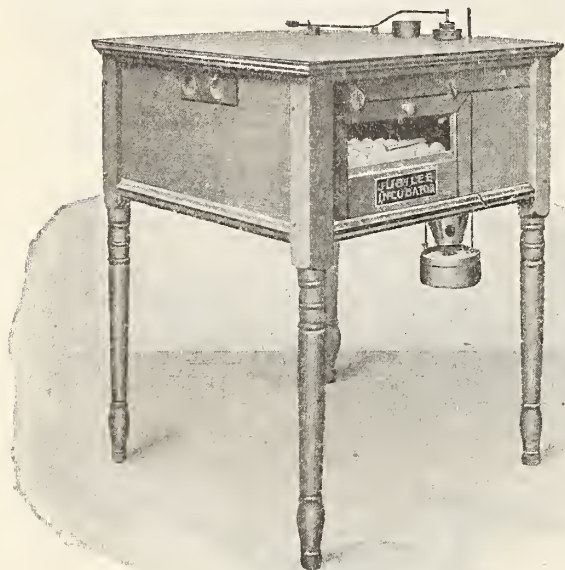
### EXTRA PARTS FOR PLANET JR. TOOLS

We carry a full line of extras. When in need of any, write us, describing the part wanted as accurately as you can, giving the number of the casting, or send a picture or pencil drawing.



# POULTRY SUPPLY DEPARTMENT

## JUBILEE INCUBATORS and BROODERS



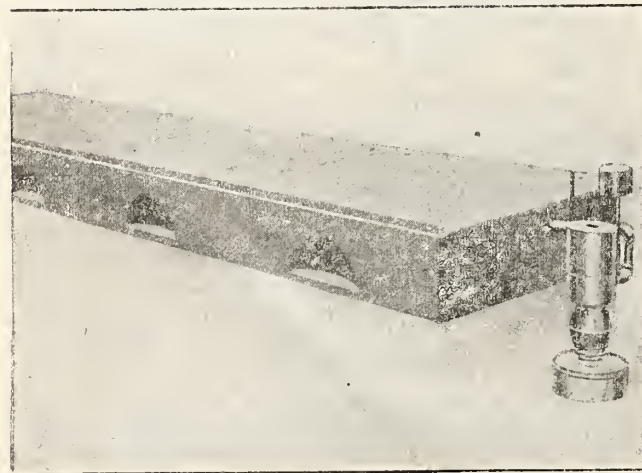
### JUBILEE INCUBATOR

The Jubilee Regulator is the most simple, the most sensitive and the most durable of any regulator in existence. It will not stick, as there are no joints to catch; plays perfectly free, and when the heat of the egg chamber reaches the degree to which it is regulated the expansion of the regulator causes a balance valve to raise off the escape flue. This allows the heat direct escapement, the circulation is retarded, and the radiation of the heat in the egg chamber is decreased—all this allows just sufficient heat radiated from the pipes to keep the temperature of the egg chamber to the desired degree.

The Jubilee system of applying moisture is the most perfect ever devised. The boiler chamber is provided with a special moisture pan, which derives its heat from the Jubilee boiler which the boiler chamber encloses. By means of a feed cap and a draw-off tube, it is possible to withdraw the last atom of moisture, or in five minutes' time increase the moisture to saturation, and more important still, all this is accomplished without opening the door of the egg chamber or exposing the eggs.

Capacity	Weight	Dimensions	Price
108-egg Jubilee	110 lbs.	2 ft. 8 in. x 3 ft.	\$22.00
216-egg Jubilee	150 lbs.	3 ft. 8 in. x 3 ft. 3 in.	32.00
324-egg Jubilee	200 lbs.	2 ft. 8 in. x 5 ft. 3 in.	40.00
504-egg Jubilee	260 lbs.	3 ft. 2 in. x 7 ft. 2 in.	50.00
1056-egg Jubilee	500 lbs.	4 ft. 10 in. x 8 ft. 4 in.	100.00

On account of advancing prices on all Galvanized steel goods and materials, prices are subject to change without notice.



## QUEEN INCUBATORS

### Stop Hatching Weak Chicks!

with cheap incubators. A Queen costs but little more, and the extra chicks that live and grow soon pay the difference.

Remember, it is not how many chicks you hatch that counts, but how many you raise. Chicks that hatch out weak and wobbly, and live but a few days, mean nothing to you but trouble and loss. They make one sick of the poultry business.

Most of the chicks you lose in the first few weeks die because they did not have, when hatched, enough strength or vitality for a good start.

### Queen Chicks Live and Grow

Queen Incubators are famous the country over for big hatches of strong, healthy chicks that live and grow. The Queen is accurately regulated, keeping the temperature just right for the hatching chick. No hot and cold changes to weaken the chick's system. The Queen is properly insulated—two layers of wood and one of corrugated strawboard, with dead air space. This also helps to maintain an even temperature for the entire hatching period. Both Queen walls are built of genuine California Redwood, which is unusual in these days of imitation and cheap substitution.

Redwood does not absorb the odor from the hatching eggs. Cheaper woods, and pasteboard lining in iron and tin machines, retain the odors, to weaken and kill the hatching chick.

### Sizes and Prices

No. 0—60-egg size... \$12.00	No. 5—400-egg size \$51.50
No. 1—85-egg size... 19.00	No. 25—550-egg size 76.50
No. 2—135-egg size... 26.50	No. 35—750-egg size 105.00
No. 3—180-egg size... 32.00	No. 45—1000-egg size 155.00
No. 4—275-egg size... 43.00	No. 55—1500-egg size 275.00
No. 65—2000-egg size... \$275.00 f. o. b. Los Angeles.	

## QUEEN BROODER STOVES

The Queen Brooder Stove is just what is needed to keep the house comfortable for the early chicks.

It is the only Brooder Stove in which both fire and amount of heat are automatically controlled by one thermostat, and one connecting rod.

Damper indicated by arrow regulates the check draft and the direct draft to the fire. Gas controlled above deflector. No gas can escape below to injure chicks. Hover is collapsible, made in sections, and easy to put together and take apart. Holds enough coal to last 40 to 48 hours.



No. 1—600 chick size... \$19.50

No. 2—1200 chick size... \$22.50

### JUBILEE INDOOR BROODERS

Capacity	Weight	Dimensions	Price
4-section—200 chicks	170 lbs.	2 ft. 6 in. x 10 ft	\$18.00
3-section—150 chicks	135 lbs.	2 ft. 6 in. x 7 ft	16.00
2-section—100 chicks	100 lbs.	2 ft. 6 in. x 5 ft	14.00

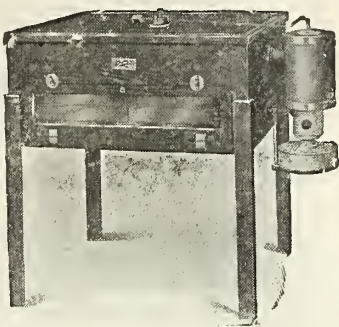


## INCUBATORS AND BROODERS--(Continued)

## HOT AIR INCUBATORS

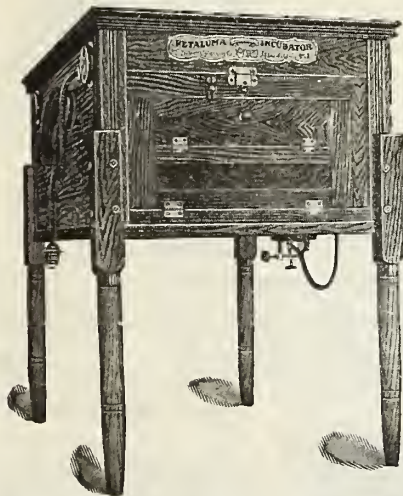
## HIGH IN QUALITY—LOW IN PRICE

Model C.—When considering this 125-Egg Essex-Model "Middle Price" Incubator costs only 9 cents an egg—and then compare it with any other make, you will say, "It is the best on earth at the price." This size that suits most poultrymen. It can be operated with any number of eggs from 125 downwards. It affords the beginner room to grow, and is therefore an economical size to buy. Price \$7.00 f. o. b. Los Angeles, while they last.



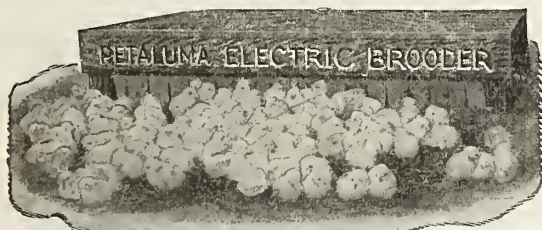
## PETALUMA ELECTRIC INCUBATOR

In keeping with our advanced ideas in the field of artificial incubation we were the first to introduce a real practical electric incubator. One that does not require an electrician to operate it. One that is simple enough for any person to understand. One that is unique in construction, safe, reliable, and using but a small amount of current. One that controls the heat perfectly and will not get out of order. One of very few parts and very simple mechanism, and will hatch any thing that can be hatched.



69-E—63 eggs.	Weight 30 lbs.	Price.....	\$12.50
30-E—126 eggs.	Weight 70 lbs.	Price.....	22.00
31-E—252 eggs.	Weight 100 lbs.	Price.....	30.00
42-E—504 eggs.	Weight 175 lbs.	Price.....	50.00

## PETALUMA ELECTRIC BROODERS

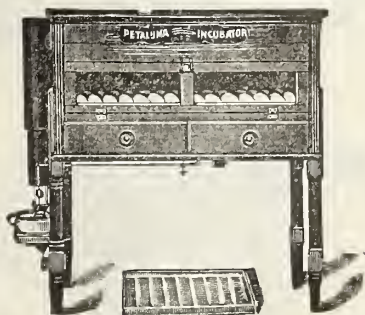


100-E—100 chick.	Weight 40 lbs.	Price.....	\$10.50
250-E—250 chick.	Weight 80 lbs.	Price.....	15.00
500-E—500 chick.	Weight 122 lbs.	Price.....	25.00

Send for catalog on Electric Incubators and Brooders.

## PETALUMA INCUBATORS AND BROODERS

Petaluma Incubators and Brooders are made of the celebrated California Redwood, the best in the world for the purpose. They are made in the best equipped factory, and the fact that they have been giving satisfaction in hatching all kinds of eggs, in all climates and under all conditions, and doing this for many years before any other incubator of the present time was known, and have continued to do so right up to the present moment, certainly stamps them as "Standard of the World."

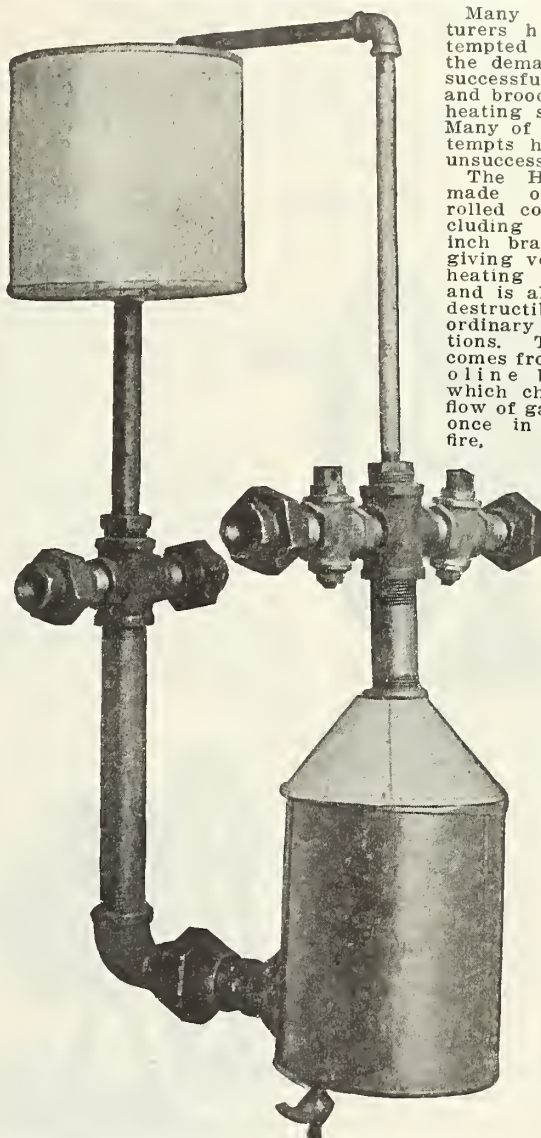


Model 59—54-egg.	Weight 30 lbs.	.....	\$12.50
Model 80—126-egg.	Weight 70 lbs.	.....	22.00
Model 81—216-egg.	Weight 100 lbs.	.....	30.00
Model 83—504-egg.	Weight 210 lbs.	.....	50.00

## THE LOS ANGELES BROODER HEATER

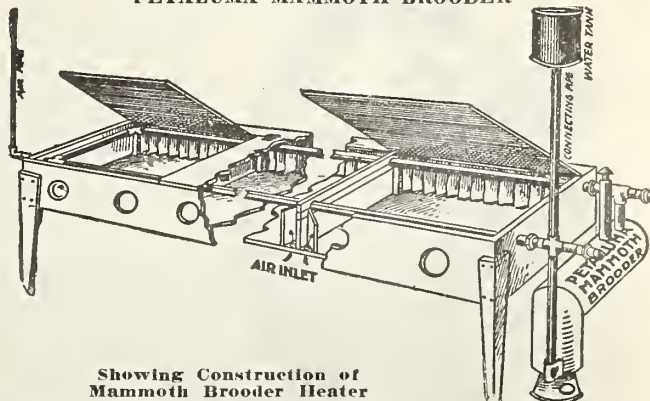
Many manufacturers have attempted to meet the demand for a successful brooder and brooder house heating system. Many of these attempts have been unsuccessful.

The Heater is made of heavy rolled copper, including 16 half-inch brass tubes, giving very large heating surface, and is almost indestructible under ordinary conditions. The heat comes from a gasoline burner, which checks the flow of gasoline at once in case of fire.



The regular size is.....\$18.50  
Oblong Boiler ..... 24.50  
Including two burners.

## PETALUMA MAMMOTH BROODER



Showing Construction of Mammoth Brooder Heater

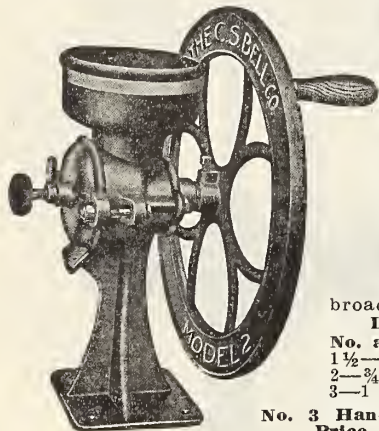
Petaluma Mammoth Brooder Heater, \$10.00; Water Tank and Connecting Pipe, \$1.00; Gasoline Tank, \$1.15; Gasoline Connecting Pipe, 50c; Chimney, 25c. This Heater with either No. 3 or No. 4 Gasoline Burner, will heat 25 to 40 feet. The entire combination, complete, with No. 3 Burner, \$16.50. The prices quoted on the combination do not include any of the pipe for the Brooders, except that from the Heater up to and including the unions, which are shown close to the heaters.



## INCUBATOR AND BROODER SUPPLIES

Lamp Founts for Incubators, No. 1, 35c ea.  
 Lamp Founts for Incubators, No. 2, 45c ea.  
 Lamp Founts for Incubators, No. 3, 60c ea.  
 Lamp Chimneys for all sizes, 25c each.  
 Burners, for Incubators, Sun-hinged, No. 2, 35c each.  
 Burners, for Incubators, Sun-hinged, No. 3, 75c each.  
 Lamp Wicks, all sizes, 15c per dozen.  
 Egg-Testers, tin, 25c each.

## GRINDING MILLS



No. 3 Hand Grinder  
 Price, \$8.50

### MODEL HAND GRINDER

The original family grist mill,—not a cheap imitation. Model Mills have more than one out-right copy but are far superior. Model Mills have harder burrs which run accurately, they are painted to a high finish, not dipped. The parts are smooth castings, carefully ground and fitted. The Mills are individually boxed, — not crated.

Model Mills last longer, do more and better grinding and have a broader range of usefulness.

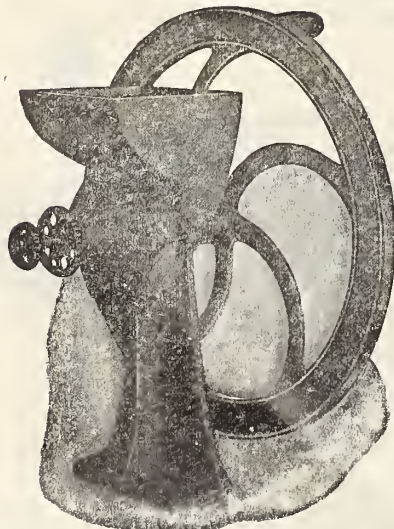
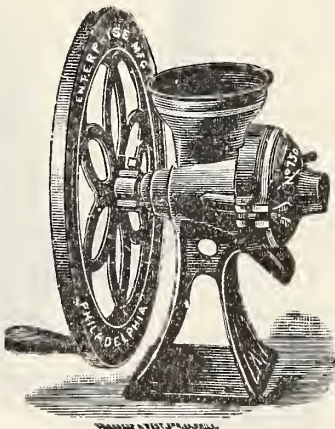
#### List of Sizes We Carry

No. and Capacity	Wt. Price
1½—½ to 1 bu. per hr.	\$4.00
2—¾ to 2½ bu. per hr.	\$6.50
3—1 to 3 bu. per hr.	\$8.50

## ENTERPRISE BONE AND GRAIN MILL

One of the essential tools for poultry men. Can be used for cracking grain, bone, shell or grit.

The Burrs are made from cold chilled steel of the best quality. This mill has for many years been the standard machine of the market, on account of its fine workmanship and durability. If you want a mill that will last and do your work get the Enterprise. Weight with crate, 75 lbs. Price, \$9.50.



Shover No. 32

Shover No. 32.—In this mill are embodied all the good features of other hand-grinding mills to which have been added universal burrs or grinding plates that are adjustable for grinding coarse or fine. This machine grinds oats, barley, rye, corn, peas, dry bone, shells, etc., for feeding to poultry. It is a well designed machine, is strong and well made throughout, and of excellent finish; has a 16-inch fly wheel, is light running.

The capacity of this mill is not equaled by any other of the same size. Shipping weight, 40 lbs. Capacity one or two bushels per hour. Price \$5.50. Power Grinding Mill, Price \$10.00.

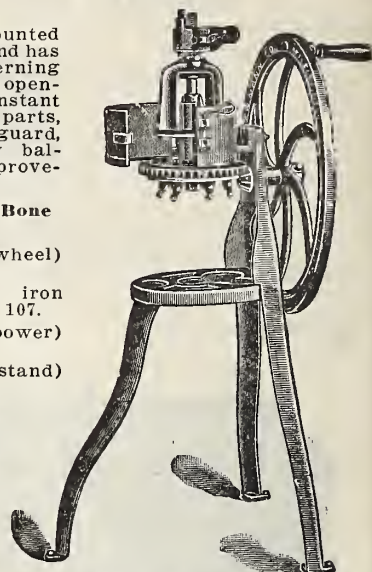
## BONE CUTTERS

### MANN'S NO. 7

The New No. 7 is mounted on a strong iron stand and has patent automatic governing spring feed. Large, open-hinged cylinder, giving instant access to all working parts, has six knives, gear guard, anti-clog device, heavy balance wheel and other improvements. (See cut.)

#### Price List of Mann's Bone Cutters

No. 5B (with balance wheel)	Price \$12.00, wt. 55.
No. 7 (B. W. and iron stand)	Price \$18.00, wt. 107.
No. 7½ (hand or power)	Price \$24.00, wt. 150.
No. 9 (B. W. and iron stand)	Price \$27.50, wt. 163.
No. 11 (power machine)	Price \$39.00, wt. 215.
No. 12 (power machine)	Price \$48.00, wt. 260.



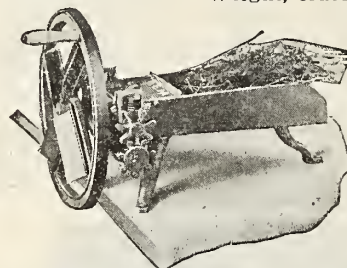
Model No. 7—Price \$18.00

## CLOVER CUTTERS

### MANN'S CLOVER CUTTER

Made entirely of iron and steel. It cuts any kind of hay or clover, either dry or green. Each revolution of the balance-wheel produces 12 cuts. Price,

With Stand .....\$14.50 Without Stand .....\$12.50  
 Weight, crated, 90 lbs.



### GEM CLOVER CUTTER

This machine is built of steel and iron throughout, and absolutely the best cutter for small coulties, cutting in lengths of ¼ inch.

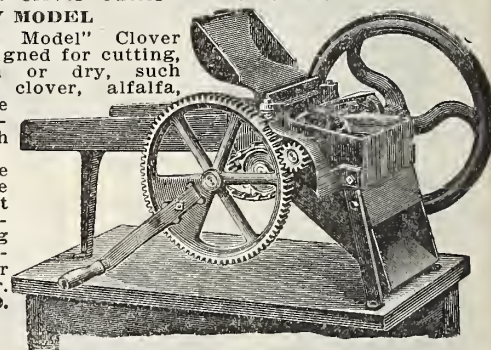
With Stand, \$15.00; wt. 78 lbs.

Without Stand, \$13.50, wt. 60 lbs.

### The Gem Clover Cutter NEW MODEL

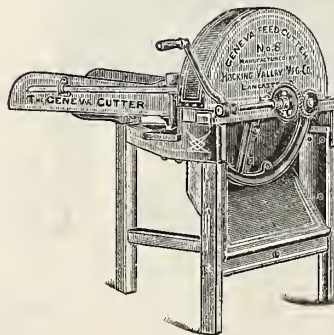
The "New Model" Clover Cutter is designed for cutting, either green or dry, such growths as clover, alfalfa, vegetable tops, etc., in to eighth-inch lengths.

These growths are the cheapest and most productive egg forming foods for cold weather. Price \$13.50.



### GENEVA FEED CUTTER NO. 6

This size has two nine inch knives and is intended for hand use only, but can be fitted for power also. It has ample size and capacity to accommodate any ranch from 1000 to 10,000 hens. It will cut ¾-inch to ¼-inch. The change is very simple and easily made. It is extremely light running and will cut any kind of feed. In material and beauty of finish it is all the most critical could ask. Price—\$30.00, f. o. b. Los Angeles. Wt. 200 lbs.





## EGG BOXES AND SHIPPING BOXES

This Self-Locking Carton holds 2 rows of 6 eggs each and will pack in a standard egg case of 30 dozen. It is always ready to hand out, thus saving handling.

	Wt.	Price
12 Boxes.....	2 lbs.	\$ .20
25 Boxes.....	3½ lbs.	.35
50 Boxes.....	7 lbs.	.65
100 Boxes.....	14 lbs.	1.25
500 Boxes.....	70 lbs.	5.75
1000 Boxes.....	140 lbs.	11.00



Self-Locking Egg Carton

Any of these articles ordered by Parcel Post add postage.

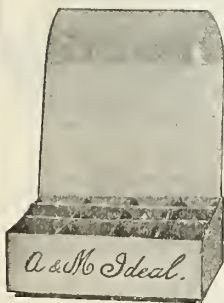
F. O. B. Los Angeles

## A. &amp; M. IDEAL EGG BOX

This carton holds one dozen of 3 eggs wide by 4 eggs long, and are used by grocers who do not pack in cases. Prices are as follows:

	Wt.	Price
12 Boxes.....	2 lbs.	\$ .15
25 Boxes.....	3½ lbs.	.30
50 Boxes.....	7 lbs.	.55
100 Boxes.....	14 lbs.	.90
500 Boxes.....	70 lbs.	4.35
1000 Boxes.....	140 lbs.	8.75

F. O. B. Los Angeles

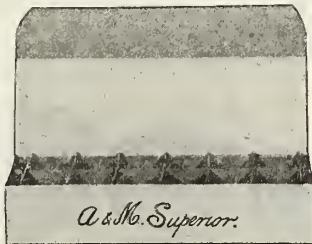


## A. &amp; M. SUPERIOR EGG BOX

This carton is 2 eggs wide by 6 eggs long, painted with plain color inside. Strong and durable.

	Wt.	Price
12 Boxes....	2 lbs.	\$ .20
25 Boxes....	4 lbs.	.35
50 Boxes....	7 lbs.	.65
100 Boxes....	14 lbs.	1.25
500 Boxes....	70 lbs.	5.75
1000 Boxes....	140 lbs.	11.00

F. O. B. Los Angeles



## A. &amp; M. SWANEE EGG BOX

This carton holds 2 rows of 6 eggs long. The box is of a blue lining, also the fillers are of blue color. This makes the egg show nice, white and clean. This is the most satisfactory box you can buy.

	Wt.	Price
12 Boxes....	2 lbs.	\$ .20
25 Boxes....	4 lbs.	.35
50 Boxes....	7 lbs.	.65
100 Boxes....	14 lbs.	1.25
500 Boxes....	70 lbs.	5.75
1000 Boxes....	140 lbs.	11.00

F. O. B. Los Angeles

## WALLACE EGG BOX

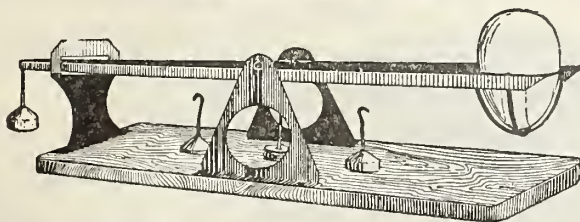
It is the one carrier that will safely deliver the goods irrespective of jars, jolts, or pressure coming from any angle. When the carrier is packed for shipment you can stand on top, bottom, ends, or sides without its buckling or crushing.

Price per doz. Boxes Wt. per doz. Boxes

1 Doz. Size 15c each,	\$1.20	10 lbs.
2 Doz. Size 20c each,	1.80	22 lbs.
3 Doz. Size 30c each,	2.40	30 lbs.
6 Doz. Size 55c each,	4.50	60 lbs.
15 Doz. Size, \$1.00 each,	9.00	150 lbs.

F. O. B. Los Angeles

## GILT EDGE EGG SCALE



Is the only Egg Scale made that will give the correct grading within a range of 17 to 30 ounces to the dozen. Standards of eggs as follows: No. 1 Pullet, 20 to 22 oz.; No. 2 Pullet, 19 to 20 oz. Price \$1.00, postpaid \$1.10.

Thoroughbred Rhode Island Red Eggs, \$1.50 per Setting.

## LEG BANDS FOR POULTRY

Spir-ol Leg Bands are made in six colors and all sizes, and are put on and taken off like a key ring. Can't drop off. Colors are black, white, red, yellow, blue, green, purple, light blue, maroon and pink. In ordering please state color wanted, also name of breed, Leghorn, Rocks, Rhode Island Reds or Turkeys. It enables us to fill the order satisfactorily. Prices:

12 Bands for.....	\$ .15 postpaid
25 Bands for.....	.25 postpaid
50 Bands for.....	.50 postpaid
100 Bands for.....	.75 postpaid
500 Bands for.....	3.60 postpaid
1000 Bands for.....	7.00 postpaid

Spir-ol Band for Chick, Bantam and Pigeon size as follows: 12 for 15c; 25 for 25c; 50 for 40c; 100 for 65c; 500 for \$3.00; 1000 for \$5.25. These bands come in the same colors as given above for Poultry Bands.



Spir-ol Leg Band

## CLIMAX LEG BANDS

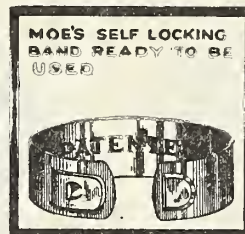
This Band is easy to put on or remove, no tools required. The rings are made of spring brass, and so bent that the tag acts as a clasp holding them securely in place. Made in three sizes. In ordering always mention the variety of fowl wanted for. Prices (15c for 12) (25c for 25) (50c for 50) (75c for 100) postpaid.



## MOE'S SELF-LOCKING LEG BAND

Locked Simply by Pushing it Together. Please order by breed and whether male or female.

12 Bands.....	\$ .15 postpaid
25 Bands.....	.25 postpaid
50 Bands.....	.45 postpaid
100 Bands.....	.75 postpaid
500 Bands.....	3.50 postpaid
1000 Bands.....	6.00 postpaid



## FLAT ALUMINUM LEG BANDS

These bands fit any variety of fowls.

Price—(12 for 15c) (25 for 30c) (50 for 50c) (100 for 75c) postpaid.

Chick Brander.—An aluminum open band for half-grown birds. They are nicely numbered and made so they can be easily adjusted. Price—(15c doz.) (80c per 100) postpaid.

## SMITH SEALED BANDS

Smith Sealed Bands were put on the market for a purpose. That purpose was to prevent dishonesty in the handling of scored birds and to protect the purchaser of same. Price—(12 for 25c) (25 for 50c) (50 for 85c) (100 for \$1.50) postpaid

## SPATZ PIGEON BANDS

The Easy-On Color Band.—The new, up-to-date Easy-On Color Band is the simplest, cheapest and easiest to apply band on the market. Made from the best celluloid and aluminum it will give long service. With a little care it can be taken off and used several times. Price—(2½c each) (25 pair 75c) (60 pair \$1.50) postpaid.

## WIRE SHIPPING COOP

This Steel Wire Shipping Coop is made from the ¼-inch steel wire electrically welded, has no loose joints, is very light and handy to use. It has a sliding gate on top where birds are put in. Has strong hardwood bottom floor, wired on to frame, and in fact contains just what any poultry dealer would want to ship chickens in. It is almost indestructible, being made so strong, and on account of being so light cost but little freight or express. They last for years. Price, chicken size, \$2.50. Weight 20 lbs. Turkey size, \$2.75. Weight 25 lbs.





## FEEDING PANS AND DRINKING FOUNTS

Made of heavily galvanized iron. Best of workmanship. Very sanitary and easily cleaned. Chicks cannot get into them or upset them.

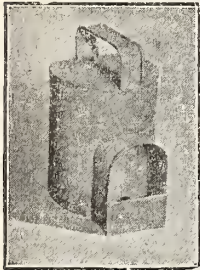
- 1 pt. size, Wt. 1 lb. .... 20c each  
 1 qt. size, Wt. 1½ lbs. .... 30c each  
 2 qt. size, Wt. 1½ lbs. .... 40c each  
 4 qt. size, Wt. 2 lbs. .... 50c each  
 8 qt. size, Wt. 2½ lbs. .... 60c each  
 F. O. B. Los Angeles



### FLAT BACK WALL CHICKEN FOUNT

This fount can be used very conveniently for Pigeons, Chickens, Ducks and other poultry. Well made of heavy galvanized iron. To hang on the wall at any convenient height from the ground.

- 1 qt. size, Weight ½ lb. .... 25c each  
 2 qt. size, Weight 1 lb. .... 35c each  
 1 gal. size, Weight 1½ lbs. .... 65c each  
 2 gal. size, Weight 3 lbs. .... 85c each  
 F. O. B. Los Angeles

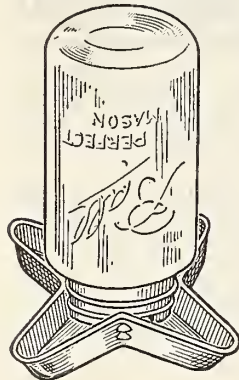


### SANITARY STONE FOUNTS

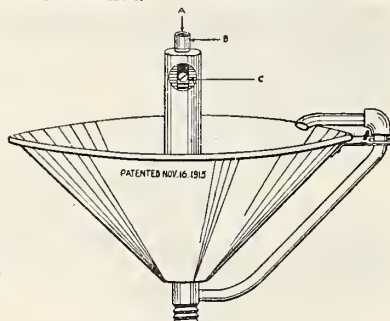
- 1 qt. 25c Wt. 4 lbs.  
 2 qt. 35c Wt. 6 lbs.  
 1 gal. 45c Wt. 7½ lbs.  
 2 gal. 55c Wt. 9½ lbs.  
 If ordering by mail or express add 25c for packing charges for one or more founts.  
 F. O. B. Los Angeles



This Star Fount is made especially for baby chicks. So arranged they can not get into the water. Made of aluminum and will last for years. Best and cheapest fount on the market.



Star Fount  
Postpaid 20c.

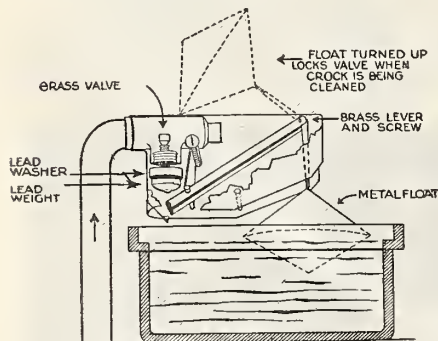


THE AUTOMATIC  
WATER FOUNTAIN

### THE AUTOMATIC WATER FOUNTAIN

It will refill and stop automatically when the water reaches its proper level. Every fountain guaranteed and replaced if found defective in any way. \$1.50 each. Weight 2½ lbs. Three fountains \$4.50, weight 8 lbs. Six fountains \$8.50, weight 20 lbs. Twelve fountains, \$16.50, weight 40 lbs. F. O. B. Los Angeles.

Prices subject to change without notice.



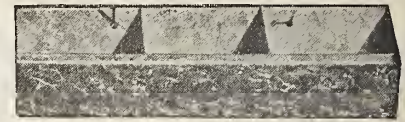
R.S. POLHEMUS, MFR. BURBANK, CAL.  
Water Boy

Thoroughbred Rhode Island Red Eggs, \$1.50 per Setting.

### AUTOMATIC WATER BOY

Water Boy consists of brass valve and stem. No fier, leather or springs to get out of order. All floats are of metal and will last a long time. Every one guaranteed. Price with metal float, 85c. In one dozen lots 80c ea. f.o.b Los Angeles. weight ½ lb.

**WALL PANS**  
 Used for all kinds of grain, cannot waste the feed. Price, (15 in. 3 compartment, 35c). Wt. 1 lb. F. O. B. here.  
 (18 in. 4 compartment, 40c). Wt. 1½ lbs. F. O. B. here.



Rabbit Compartment Wall Pans

**Flanged Edge Feeders.** These are made of stoneware and glazed with a flanged edge for feeding rolled barley. The flanged edge prevents rabbit from throwing out the grain and wasting it. Comes in white, glazed.



Rabbit Feeders

- No. 1, 10c each, 3 for 25c, 1 dozen, 90c. .... Weight 1 lb. (each)  
 No. 2, 10c each, 1 dozen, \$1.00. .... Weight 2 lbs. (each)  
 No. 3, 15c each, 1 dozen, \$1.50. .... Weight 2½ lbs. (each)  
 No. 4, 20c each, 1 dozen, \$1.75. .... Weight 4 lbs. (each)

If ordering by mail or express add 25c to order for packing, etc.

### RABBIT DRINKING FOUNTAIN

These fountains are made especially strong and durable for rabbits. The wide bottom prevents them turning over. Not broken easily.



Rabbit Drinking Fountains

- 1 pt. 10c each, 3 for 25c; per dozen, 90c. .... Weight, 1 lb. each  
 1 qt. 10c each; per dozen \$1.00. .... Weight 2 lbs. each  
 ½ gallon, 15c each; per dozen, \$1.50. .... Weight 4 lbs. each  
 1 gallon, 25c each; per dozen, \$2.75. .... Weight 4½ lbs. each  
 F. O. B. Los Angeles

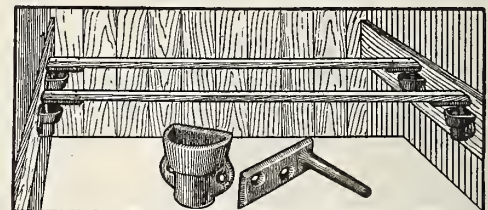
If ordering by Mail or Express add 25c to order for Packing.

### ESSEX ROOST HANGER

Heavy iron bracket. Has deep trough to hold lice spray. 4 in. long, ½ in. wide, ½ in. deep.

Price per pair, 40c. Wt. 1½ lbs. F. O. B. Los Angeles.

### A. & M. ROOST HANGER



A. & M. Roost Hanger

New invention. Fasten in wood as shown in cut. Fill cups with lice killer. Best Roost Hanger on the market. Price per pair, 30c; postpaid, 40c. Price per dozen pairs, \$3.00. F. O. B. Los Angeles. Weight 15 lbs. per dozen pairs.

### PIGEON NESTS

Fills a long-felt want for all squab breeders. Wood gets filthy and vermin laden in a very short time. Iron or earthen-ware is cold and bad for the birds. Indurated Fibre is lighter than wood, will not warp or break, has a brown finish (not polished), which makes it easy to clean. Impervious to vermin or moisture and is a non-conductor of either heat or cold. A money-saver, and will increase the hatch. Sanitary, handsome, practically indestructible and cheap. Has hole in bottom for screw to hold nest firm and steady. Price 15c each.



Diameter	Carton Contains	Carton Weighs	Price Per Dozen
9 in.	3 doz.	22 lbs.	\$1.50





Double Chick Feeder



Single Chick Feeder

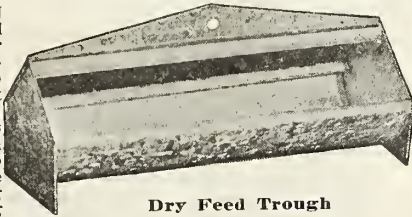
## DUCK TROUGHS

The bottom of the trough being round in shape, makes it superior to all others, as it can be easily cleaned and prevents food from becoming stale in corners. The grate slide is a feature not to be found in any other feed trough. Price 10 inch, 40c, weight 2 lbs.; 20 inch 60c, weight 3 lbs., f. o. b. Los Angeles.

## DRY FEED TROUGH

This galvanized iron dry mash feeder has no seams or crevices to allow feed to lodge and sour. It is easily washed and kept clean. Fowls can feed on both sides. It has a sharp partition through the center, preventing birds from fouling and getting into the feed.

(18-inch, 2 lbs., 75c) (24-inch, 3 lbs., 85c) f. o. b. Los Angeles.



Dry Feed Trough

## ROUND BOTTOM DRY FOOD HOPPER

With two apartments. Will feed dry meal on beef scraps and not clog. Price 85c. Wt. 5 lbs. F. O. B. Los Angeles.



Round Bottom Dry Food Hopper

## ROUND BOTTOM SHELL AND GRIT BOX

Made so shell or grit will not clog. Price 70c. f.o.b. Los Angeles. Wt. 4 lbs.



Round Bottom Shell and Grit Box



Round Bottom Hopper

## GREAT WESTERN DRY MASH FEEDER



This feeder comes in three sizes: 18, 24, and 30. Made of heavy iron. Price—18 in. \$1.50, Wt. 7 lbs.; 24 in. \$1.75, Wt. 9 lbs.; 30 in. \$2.00, Wt. 10 lbs. f. o. b. Los Angeles.

Great Western Dry Mash Feeder

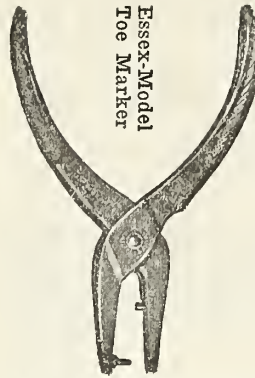
Any of the following articles ordered by Parcel Post and postage.

## DOUBLE FEEDERS

12 in. 50c, wt. 1 lb.  
18 in. 65c, wt. 1½ lb.  
24 in. 75c, wt. 2 lbs.  
30 in. 90c, wt. 2½ lb.

## SINGLE FEEDERS

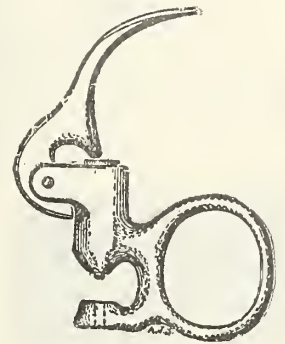
12 in. 30c, wt. 1 lb.  
18 in. 40c, wt. 1½ lb.  
24 in. 60c, wt. 2 lbs.  
30 in. 80c, wt. 2½ lb.  
F.O.B. Los Angeles.



Essex Model Toe Marker

## Essex Model Toe Marker

This marker makes a clean cut and has a separate stop to prevent bruising the web of the foot. 50c postpaid.



## Easy Poultry Punch

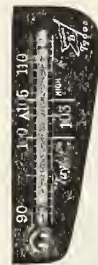
Made of brass, so simple in construction any one can use this punch with ease. Price, 35c, postpaid.

## Petty's Poultry Punch

One of the most convenient punches made. It is small and easy to operate, cutting a clean hole every time. Price, 20c; postpaid 25c.



## INCUBATOR AND BROODER THERMOMETERS



No. 2—75c

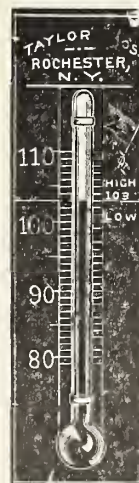


No. 3—75c



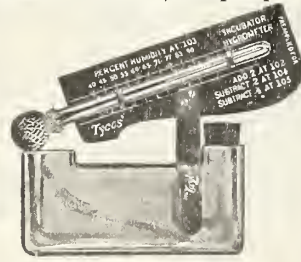
No. 4—65c

Many persons using Incubators and Brooders fail to understand the importance of having a thoroughly tested and reliable thermometer. Many a fine hatch is lost, and many a fine brood of chicks killed by using a poor thermometer. Use great care in purchasing a perfect thermometer. Our thermometers are thoroughly tested and accurate.



Our Brooder Thermometers are in two styles, half round and flat. Made by Tyco's Co. and guaranteed correct. Price of the half round Brooder Thermometer, packed, 75c, postpaid.

No. 1 all glass Incubator Thermometer. Price \$1.00 postpaid.



Tyco's Hygrometer

## MOISTURE REQUIREMENTS

The amount of moisture required, during the period of incubation, varies from 65 per cent to 53 per cent. For the convenience of our friends and patrons we give the following table of the percentage of moisture best adapted to each week of incubation:

First week there should be about 65 per cent of moisture present;

Second week there should be about 60 per cent of moisture present;

Third week there should be about 55 per cent of moisture present;

At the time of hatching, about 50 per cent of moisture. Price, \$1.50, postpaid.



No. 1



## POULTRY INSTRUMENTS

### CAPONIZING SET

This set is one of the latest design. It is a combination of tools that can be used with one hand and seldom causes the operator to slip and cause the loss of the bird. Price, complete in case, \$3.00, prepaid.

### SPECIAL CAPONIZING SET

Price, complete in oak case, prepaid, \$4.00.

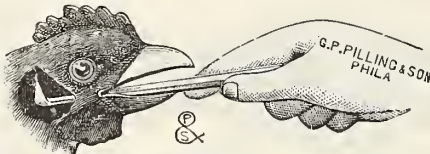


This set contains the latest patented extractor. The operation can be easily done by any beginner, without much loss. Complete instructions with each set.



### Pilling Angular Killing Knife

By simply turning the wrist the jugular vein and spinal cord are cut, thereby bleeding the fowl, allowing the feathers to be removed without using water. 50c, postpaid.



Showing Angular Killing Knife

### Pilling French Poultry Killing Knife



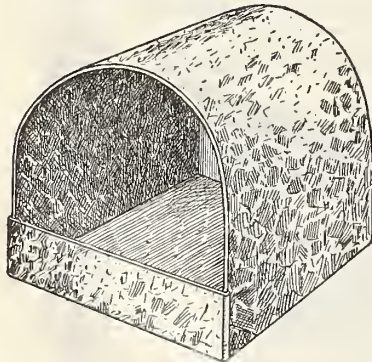
Every poultry raiser should have one of our Killing knives. They are made of a finely tempered instrument steel with nickeled handle; will last a lifetime. Send postpaid on receipt of 50 cents. Don't wait! Send for one now! Sent securely packed by mail on receipt of price.

### METAL NEST

Single \$1.20; 2 compartment, \$1.75  
Wt. 7 lbs.; 3 compartment \$2.00.  
Wt. 9 lbs. F. O. B. Los Angeles.



Thoroughbred Rhode Island Red Eggs, \$1.50 per Setting.



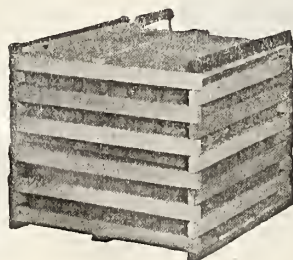
### COVERED TOP METAL NEST

Made single only. Best of iron. \$1.50 each. Wt. 5 lbs., f. o. b. Los Angeles. Add postage, etc.

Any of the following articles ordered by Parcel Post add postage.

### HUMPTY-DUMPTY EGG CARRIER

One of the handiest egg carriers on the market. This carrier will hold twelve (12) dozen eggs. Can be folded flat for shipment, and is made of strong but light wooden slats fastened with strong steel wires. Very handy and something every poultryman should have. Price, 75c each, f. o. b. Los Angeles. Weight 6 lbs.



### A. & M. LICE KILLING NEST EGGS

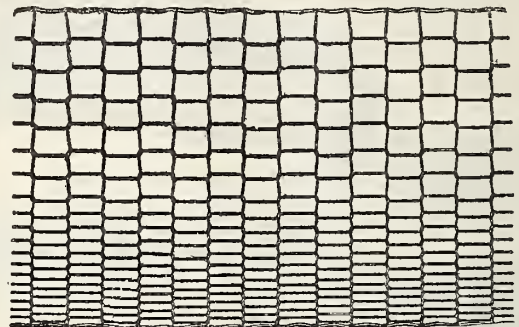
Our Lice Killing Nest Eggs are almost an exact imitation of the real chicken eggs, and contain a powerful disinfectant which is guaranteed to expel lice and vermin. Put up in boxes of one dozen each, at 65c. Weight 2 lbs.

### CHINA NEST EGGS

We handle only the best grade of glass eggs, strong and durable. 2 for 5c; 25c dozen. Postpaid, 35c.

## Warner Junior Poultry Fencing

Warner Junior Poultry Fence is made of No. 18 galvanized wire with No. 14 wire top and bottom, stay wires placed 4½ inches apart. At the bottom of the fence mesh is 1½ inch and gradually widens as the top is reached.



### THE WARNER JUNIOR POULTRY FENCE

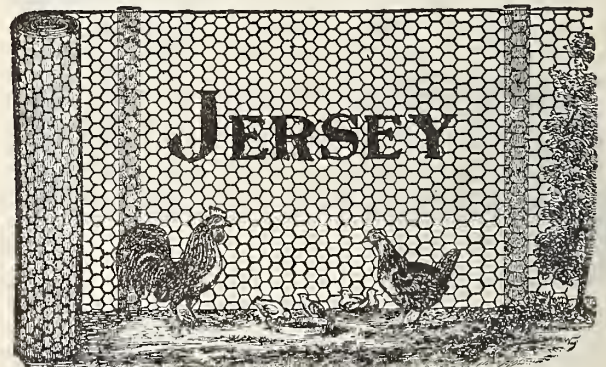
Put up in 10 rod rolls.

3 ft. wide, per roll.....	\$4.75
4 ft. wide, per roll.....	5.25
5 ft. wide, per roll.....	6.15
6 ft. wide, per roll.....	6.90

Subject to market fluctuations.

## Jersey Poultry Fencing

This wire is made of the full 20 gauge hand drawn steel wire galvanized after weaving. Each roll contains 150 running feet.



On account of great changes in steel goods, all wire prices are subject to market fluctuation.

Per roll				Per roll			
1	ft.	2 inch mesh....	\$1.25	1	ft.	1 inch mesh....	\$3.15
1½	ft.	2 inch mesh....	1.90	1½	ft.	1 inch mesh....	4.75
2	ft.	2 inch mesh....	2.50	2	ft.	1 inch mesh....	6.30
3	ft.	2 inch mesh....	3.80	3	ft.	1 inch mesh....	9.45
4	ft.	2 inch mesh....	5.10	4	ft.	1 inch mesh....	12.00
5	ft.	2 inch mesh....	6.35	5	ft.	1 inch mesh....	15.75
6	ft.	2 inch mesh....	7.65	6	ft.	1 inch mesh....	18.90

Thoroughbred Rhode Island Red Eggs, \$1.50 per Setting.



# POULTRY REMEDIES AND FEEDS

Pigeon Food, Club Mixed...	Ground Flax, Pure .....
Pigeon Food, A. & M. ....	Armaur's Beef Scrape .....
A. & M. Scratch Food, No. 1.	Cudahy's Beef Scrape .....
A. & M. Scratch Food, No. 2.	Darling's Beef Scrape .....
Bird Gravel, 4 doz. case....	Darling's Meateln .....
Bird Gravel, 100-lb. bag....	Fish Meal, for Poultry .....
Granite Grit, 100-lb. bag....	A. & M. Chick Food Special.
Pigeon, Red Wing.....	A. & M. Special Chick Food,
Blood Meal .....	50 lb. sacks .....
Cocoanut Meal .....	A. & M. Growing Chick Food
Soya Bean Meal .....	A. & M. Egg Food, 90 lb. sk.

Prices quoted on application.

## MISCELLANEOUS

Bird Seed, mixed .....	Per lb. 15c
Canary—plain .....	Per lb. 15c
Hemp .....	Per lb. 10c
Rape — Common .....	Per lb. 10c
Sunflower .....	Per lb. 15c
Flax Seed .....	Per lb. 15c
Buckwheat .....	Per 100 lbs. \$5.75
Vetch—for pigeons .....	Per lb. 10c
Tobacco Stems .....	Per lb. 15c
Clam Shell—Common, machine screened..	\$1.00 per 100 lbs.
Oyster Shell—Fine, medium and course ...	\$1.50 per 100 lbs.
Oyster Meal .....	\$1.50 per 100 lbs.
Prices subject to market fluctuations.	
Clam, Common, Machine Screened.....	Price on application
Oyster Meal .....	Price on application
Oyster, Fine, Medium and Coarse .....	Price on application

## GRAIN & MILL FEED

Barley, Ground .....	Oats, Plain White .....	100 lbs.
Barley, Hulled .....	Oats, Hulled .....	
Barley, Meal .....	Oats and Wheat Middlings..	
Barley, Whole .....	Oats, Rolled White .....	
Barley, Rolled .....	Oats, Steel Cut .....	
Bran, Heavy White, 80-lb. sx .....	Oats, Ground .....	
Bran, Light, 60-lb. sx.....	Wheat, Cracked .....	
Shorts, 60-lb. sx.....	Wheat, Recleaned, 133-lb. sx	
Shorts, 100-lb. sx.....	Wheat, Recleaned, 100-lb. sx	
Corn, Feed Meal .....	Wheat, Turkey Red .....	
Corn, Milo Maize .....	Alfalfa Meal .....	
Corn, Egyptian .....	Alfalfa Molasses .....	
Corn, White .....	Beet Pulp, Steam Dried ...	
Corn, Yellow .....	Beet Pulp, Molasses .....	
Corn, Yellow, Cracked .....	Cotton Seed Meal .....	
Corn, King Philip .....	Oil Cake Meal .....	
Oats, Flaked Pure, 80-lb. sk.		
Prices on application		

## CONDIMENTS

Mustard—Ground .....	Per lb. 35c
Ginger—Ground .....	Per lb. 35c
Pepper—Chili, ground .....	Per lb. 20c
Pepper—Seed for poultry .....	Per lb. 20c
Salt—Rock .....	Per lb. 5c
Salt—Leslie's Loop .....	Per Brick 25c
Salt—Leslie's Brick—Plain (8 lbs.) .....	Per Brick 50c

## PACKAGE GOODS

Blood Meal .....	35c pkg.
Charcoal .....	15c pkg.
Hydrated Lime .....	15c pkg.

## PRATT FOOD CO. Stock and Poultry Remedies

Animal Regulator .....	Retail each
Animal Regulator .....	\$ .25
Animal Regulator .....	.50
Animal Regulator .....	1.00
Animal Regulator .....	1.75
Animal Regulator .....	3.00
Animal Regulator .....	6.00
Animal Regulator .....	11.00
Bronchitis Remedy .....	.25
Bronchitis Remedy .....	.50
Bag Ointment .....	.25
Bag Ointment .....	.50
Condition Tablets .....	.25

Condition Tablets .....	.50
Chicken Cholera Remedy .....	.25
Chicken Cholera Remedy .....	.50
Cow Remedy .....	.50
Cow Remedy .....	1.00
Cow Remedy, Tins 12 lbs. ....	2.00
Cow Remedy, Tins, 25 lbs. ....	3.50
Condition Powder .....	.25
Condition Powder .....	.50
Condition Powder, Pails 12 lbs. ....	2.00
Condition Powder, Pails 25 lbs. ....	3.50
Dip and Disinfectant, 1 qt. ....	.40
Dip and Disinfectant, 2 qt. ....	.70
Dip and Disinfectant, 1 gal. ....	1.25
Distemper and Pink Eye Remedy ..	.50
Fly Chaser .....	.35
Fly Chaser .....	.60
Fly Chaser .....	1.00
Gape Remedy .....	.25
Gope Remedy .....	.50
Head Lice Ointment .....	.25
Heave Cough, Cold Remedy .....	.50
Heave Cough, Cold Remedy .....	1.00
Healing Powder .....	.25
Healing Ointment and Gall Remedy ..	.25
Healing Ointment and Gall Remedy ..	.50
Hog Cholera Specific .....	.50
Hog Cholera Specific, Pails 12 lbs. ....	2.00
Hog Cholera Specific, Pails 25 lbs. ....	3.50
Lice Killer .....	.25
Lice Killer .....	.50
Lice Killer (Liquid) .....	.35
Lice Killer (Liquid) .....	.60
Lice Killer (Liquid) .....	1.00
Liniment .....	.25
Liniment .....	.50
Liniment .....	1.00
Poultry Regulator .....	.25
Poultry Regulator .....	.50
Poultry Regulator .....	1.00
Poultry Regulator, Pails 12 lbs. ....	1.50
Poultry Regulator, Pails 25 lbs. ....	3.00
Poultry Regulator, Sacks 12 lbs. ....	1.25
Poultry Regulator, Sacks 25 lbs. ....	2.50
Poultry Regulator, Sacks 50 lbs. ....	5.00
Poultry Regulator, Sacks 100 lbs. ....	9.00
Poultry Disinfectant, 5 gallons .....	.40
Poultry Disinfectant, 10 gallons .....	.70
Poultry Disinfectant, 50 gallons .....	1.25
Peerless Hoof Ointment .....	.25
Peerless Hoof Ointment .....	.50
Roup Remedy .....	.25
Roup Remedy .....	.50
Roup Remedy .....	1.00
Sorehead Chicken-Pox Remedy .....	.25
Sorehead Chicken-Pox Remedy .....	.50
Scaly Leg Remedy .....	.25
Scaly Leg Remedy .....	.50
Spavin Remedy (Liquid) .....	.50
Spavin Remedy (Liquid) .....	1.00
Spavin Remedy (Paste) .....	.50
Veterinary Colic Remedy .....	.50
Veterinary Colic Remedy .....	1.00
White Diarrhoea Remedy .....	.25
White Diarrhoea Remedy .....	.50
Worm Powder .....	.50
Worm Powder .....	1.00

## DRS. HESS & CLARK REMEDIES

	Retail each
Cough and Distemper .....	\$ .50
Colic Remedy .....	.50
Colic Remedy .....	1.00
Dip and Disinfectant .....	.50
Dip and Disinfectant .....	.75
Dip and Disinfectant .....	1.25
Dip and Disinfectant .....	5.00
Dip and Disinfectant .....	9.50
Dip and Disinfectant .....	.35
Healing Powder .....	.25
Healing Powder .....	.50
Heave Powder .....	.50
Instant Louse Killer .....	.25
Instant Louse Killer .....	.60
Poultry Pan-a-cea .....	.25
Poultry Pan-a-cea .....	.50
Poultry Panacea .....	1.00
Poultry Pan-a-cea, Pails 25 lbs. ....	3.00
Roup Remedy .....	.25
Roup Remedy .....	.50
Stock Tonic .....	.25
Stock Tonic .....	.65
Stock Tonic .....	1.00
Stock Tonic, Sack 25 lb. ....	2.25
Stock Tonic, Pail 25 lb. ....	2.25
Stock Tonic, Sack 50 lb. ....	3.70
Stock Tonic, Sack 100 lb. ....	7.00
Worm Powder .....	.50
Worm Powder .....	1.00
Worm Powder .....	2.50



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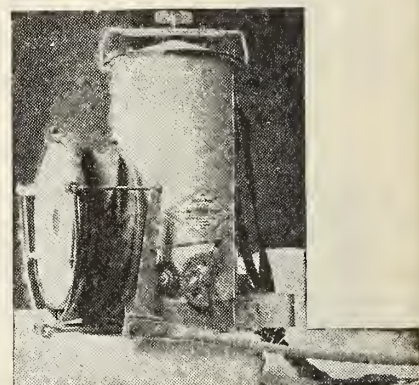
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## The American Beauty Dust Sprayer



For Orchard, Vineyard, Garden and Field. If interested write for circular.

Because of its bellows capacity, it can be used where no other knapsack sprayer could possibly reach.

Its spiral agitator and fine screen cause it to deliver a finer dust than any other machine, hence it is more thorough and economical.

It is built on correct principles and has been used under the most severe conditions, with remarkable success.

Our hundreds of satisfied customers are our best advertisement.

Standard size, weight 14 lbs., \$16.00.



**The AGGELER & MUSSER SEED CO. Inc.**  
**Corner 6th and Alameda Sts., Los Angeles, Cal., U.S.A.**

Please forward the following **ORDER** for amount enclosed (write your name and address distinctly)

Name .....

Street ..... P. O. Box.....

Post Office ..... R. F. D. No.....

County..... State.....

Forward Goods by .....

State whether by Mail, Express (and company),  
Freight (and route), Steamer (and line).

Name of Station or Exp. Office.....

Amount Enclosed

P. O. Money Order .....

Exp. Money Order.....

Draft .....

Cash .....

Stamps, .....

Total .....

Date ....., 191.....

NOTICE—We give no warranty, express or implied, as to description, quality, productiveness or any other matter of any seeds or bulbs we send out and we will not be in any way responsible for the crop. If the purchaser does not accept the goods on these terms, they are to be returned at once. Aggeler & Musser Seed Co. (Inc.).

[illegible]

(OVER)



EXTRA ORDER SHEETS AND RETURN ENVELOPES FURNISHED ON REQUEST

[illegible]

## POSTAGE

Garden Seeds priced by the packet, ounce, one-fourth pound and pound are postage paid. Peas, Beans, Onion Sets, Corn, Grass and Field Seeds and Sundry Articles are not postpaid. In ordering one pound lot, add ten cents per pound for postage and packing, and on larger quantities apply parcel post charges.

### DOMESTIC PARCEL POST RATES

On Seeds, Plants, Bulbs, Roots, Books, Tools, etc.  
within the U. S. and Possessions

DOMESTIC PARCEL POST RATES On Seeds, Plants, Bulbs, Roots, Books, Tools, etc. within the U. S. and Possessions	First pound or fraction	Each additional pound or fraction
First Zone, Los Angeles or 50 miles thereof .....	5c	1c
Second Zone, within 50 to 150 miles .....	5c	1c
Third Zone, within 150 to 300 miles .....	6c	2c
Fourth Zone, within 300 to 600 miles .....	7c	4c
Fifth Zone, within 600 to 1000 miles .....	8c	6c
Sixth Zone, within 1000 to 1400 miles .....	9c	8c
Seventh Zone, within 1400 to 1800 miles .....	11c	10c
Eighth Zone, all over 1800 miles .....	12c	12c

Please do not ask questions on this Order Sheet, but kindly write them and all communications requiring an answer on a separate sheet of paper and inclose with your order. Be sure that your Full Name and Address are on Both Letter and Order.

**This space is for remarks about your order.**



**The AGGELER & MUSSER SEED CO. Inc.**  
**Corner 6th and Alameda Sts., Los Angeles, Cal., U.S.A.**

Please forward the following ORDER for amount enclosed (write your name and address distinctly)

Name \_\_\_\_\_

Street ..... P. O. Box .....

Post Office ..... R. F. D. No.....

County \_\_\_\_\_ State \_\_\_\_\_

Forward Goods by .....

State whether by **Mail**, **Express** (and company),  
**Freight** (and route), **Steamer** (and line).

Name of Station or Exp. Office.....

## Amount Enclosed

P. O. Money Order .....

Exp. Morley Order.....

Draft .....

Cash .....

Stamps, .....

Total .....

Date ....., 191.....

NOTICE—We give no warranty, express or implied, as to description, quality, productiveness or any other matter of any seeds or bulbs we send out and we will not be in any way responsible for the crop. If the purchaser does not accept the goods on these terms, they are to be returned at once. Aggeler & Musser Seed Co (Inc.).

[illegible]

(OVER)



EXTRA ORDER SHEETS AND RETURN ENVELOPES FURNISHED ON REQUEST

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Please do not ask questions on this Order Sheet, but kindly write them and all communications requiring an answer on a separate sheet of paper and inclose with your order. Be sure that your Full Name and Address are on Both Letter and Order.

**This space is for remarks about your order.**



The following is a calendar for the general planting of vegetables, but, owing to the various soils and climatic conditions, this calendar cannot be applied to every locality, even in Southern California, for which this calendar is intended

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	OCTOBER	NOVEMBER	DECEMBER	
Asparagus Beans Brussels Cabbage Carrots Celery Chervil Chicory Corn Salad Cress Egg Plant Horse Kale Kohl Rabi Lettuce Mustard Onions Parsley Peas Peppers Potatoes Rhubarb Raspberries Spinach Winter Turnip	Asparagus Beans Brussels Cabbage Carrots Celery Chervil Chicory Corn Salad Cress Egg Plant Horse Kale Kohl Rabi Lettuce Mustard Onions Parsley Peas Peppers Potatoes Rhubarb Raspberries Spinach Winter Turnip	Artichoke Asparagus Beans Cabbage Carrots Celery Chervil Chicory Corn, Sweet Corn, Field Cucumbers Egg Plant Lettuce Melons, Musk Okra Onions Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Tomato Turnip	Artichoke, Seed Asparagus Beans Cabbage Carrots Celery Chervil Chicory Corn, Sweet Corn, Field Cucumbers Egg Plant Lettuce Melons, Musk Okra Onions Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Tomato	Artichoke, Seed Asparagus Beans Cabbage Carrots Celery Chervil Chicory Corn, Sweet Corn, Field Cucumbers Egg Plant Lettuce Melons, Musk Okra Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Tomato	Artichoke, Seed Asparagus Beans Cabbage Carrots Celery Chervil Chicory Corn, Sweet Corn, Field Cucumbers Egg Plant Lettuce Melons, Musk Okra Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Tomato	Beets Beans Cabbage Carrots Cauliflower Corn, Field Cucumbers Egg Plant Kale Kohl Rabi Lettuce Melons, Musk Okra Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Tomatoes	Artichoke, Seed Beans Brussels Early Sprouts Cabbage Carrots Cauliflower Chervil Chicory Chives Cucumbers Egg Plant Endive Garlic Kale Kohl Rabi Lettuce Mustard Onion Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Turnip	Artichoke Beets Brussels Early Sprouts Cabbage Carrots Cauliflower Chervil Chicory Chives Cucumbers Egg Plant Endive Garlic Kale Kohl Rabi Lettuce Mustard Onion Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Turnip	Beets Beans Brussels Cabbage Carrots Cauliflower Chervil Chicory Chives Cress Egg Plant Endive Garlic Kale Kohl Rabi Lettuce Mustard Onion Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Turnip	Beets Beans Brussels Cabbage Carrots Cauliflower Chervil Chicory Chives Cress Egg Plant Endive Garlic Kale Kohl Rabi Lettuce Mustard Onion Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Turnip	Beets Beans Brussels Cabbage Carrots Cauliflower Chervil Chicory Chives Cress Egg Plant Endive Garlic Kale Kohl Rabi Lettuce Mustard Onion Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Turnip	Artichoke, Plants Asparagus Beans Brussels Cabbage Carrots Cauliflower Chervil Chicory Chives Cress Egg Plant Endive Garlic Kale Kohl Rabi Lettuce Mustard Onion Parsley Peas Peppers Potatoes Rhubarb Raspberries Seed Spinach Summer Squash Turnip

\*Plant in frostless sections only  
†Plant seed in hot bed  
‡Plant both seed and plants

‡Plant in low, heavy land.  
§In the Colorado Desert.

### Calendar for Planting Flowers

JANUARY Sow Seed	FEBRUARY Sow Seed	MARCH Sow Seed	APRIL Sow Seed	MAY Sow Seed	JUNE Sow Seed
Antirrhinum Centaurea Calliopsis Celosia Chrysanthemum Salvia Sweet Peas <b>Transplant</b> Carnation Petunia Pansy Stocks Shasta Daisy Verbena <b>Bulbs</b> Anemones Cannas Callas Dahlia Easter Lilies Gladiolus Narcissus Ranunculus	Antirrhinum Asters Calliopsis Celosia Chrysanthemum Salvia Sweet Peas <b>Transplant</b> Carnation Petunia Pansy Stocks Shasta Daisy Verbena <b>Bulbs</b> Callas Cannas Dahlia Gladiolus Tuberose	Asters Balsam Centaurea Dianthus Marigold Nasturtium Snap-Drageon Sweet Peas Zinnia <b>Transplant</b> Asters Celosia Centaurea Calliopsis Salvia Shasta Daisy Verbena <b>Bulbs</b> Callas Cannas Dahlia Gladiolus Tuberose	Ageratum Balsam Cosmos Centaurea Coreopsis Celosia Daisies Nasturtium Poppies Snap-Drageon Zinnia <b>Transplant</b> Asters Antirrhinum Centaurea Calliopsis Chrysanthemum Celosia Salvia <b>Bulbs</b> Amaryllis Cannas Dahlia Gladiolus Tuberose	Carnation Cosmos Coreopsis Candytuft Centaurea Daisies Digitalis Forget-me-not Gillardia Marigold Nasturtium Petunia Poppies Salpiglossis Scabiosa <b>Transplant</b> Asters Antirrhinum Balsam Centaurea Dianthus Marigold Snap-Drageon Zinnia <b>Bulbs</b> Amaryllis Cannas Dahlia Gladiolus Tuberose	Carnation Cosmos Coreopsis Candytuft Cineraria Centaurea Digitalis Daisies Forget-me-not Gillardia Marigold Phlox Petunia Poppies Salpiglossis <b>Transplant</b> Ageratum Balsam Carnation Cosmos Centaurea Coreopsis Celosia Daisies Hollyhock Snap-Drageon Violets Zinnia <b>Bulbs</b> Cannas Gladiolus
JULY Sow Seed	AUGUST Sow Seed	SEPTEMBER Sow Seed	OCTOBER Sow Seed	NOVEMBER Sow Seed	DECEMBER Sow Seed
Antirrhinum Canterbury Bells Centaurea Cosmos Lobelia Pansies Stocks <b>Transplant</b> Carnation Cosmos Coreopsis Candytuft Centaurea Daisies Digitalis Forget-me-not Gillardia Marigold Phlox Petunia Salpiglossis Scabiosa Violets	Columbine Calendula Canterbury Bells Centaurea Cosmos Lobelia Pansies Pinks Primula Petunia Verbena <b>Transplant</b> Carnation Cosmos Coreopsis Candytuft Cineraria Centaurea Digitalis Daisies Gillardia Marigold Phlox Petunia Salpiglossis Violets	Carnation Columbine Calendula Candytuft Forget-me-not Pansies Stocks Sweet Peas, Xmas. <b>Transplant</b> Antirrhinum Canterbury Bells Centaurea Cosmos Lobelia Pansies Stocks Violets <b>Bulbs</b> Callas Freelias Iris <b>Climbing Vines</b> Australian Pea Vine Cobea Scandens Kudzu Vine Moon Flower Morning Glory Passion Flower Smilax Virginia Creeper	Coreopsis Centaurea Cineraria Forget-me-not Larkspur Pansies Stocks Sweet Peas <b>Transplant</b> Cineraria Columbine Calendula Lobelia Pansy Pinks Primula Petunia Verbena <b>Bulbs</b> Anemones Callas Easter Lilies Freelias Hyacinths Iris Narcissus Ranunculus Tulips	Carnation Centaurea Larkspur Pansies Sweet Peas Stocks <b>Transplant</b> Carnation Columbine Calendula Candytuft Forget-me-not Pansies Stocks <b>Bulbs</b> Anemones Callas Easter Lilies Freelias Hyacinths Iris Narcissus Ranunculus Tulips  Mignonette may be sown all the year around.	Sweet Peas <b>Transplant</b> Coreopsis Centaurea Cineraria Larkspur Pansies Stocks <b>Bulbs</b> Anemones Callas Cannas Easter Lilies Freelias Hyacinth Iris Narcissus Ranunculus Tulip <b>Border Plants</b> Alyssum Ageratum Begonias Coleus Geranium Shasta Daisy Verbena



GOLDEN  
HYBRID

CASABAS

HONEY  
DEW

FOUR PACKETS  
ONE oz.  
EACH OF THESE

50¢

GOLDEN  
BEAUTY

GOLDEN  
HONEY